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ABSTRACT

A study assessed the need for occupational information at the national level. During the study, researchers interviewed representatives of the following agencies and organizations: the Bureau of Labor Statistics, the Bureau of Occupational and Adult Education, the American Vocational Association, the National Advisory Council on Vocational Education, the Employment and Training Administration, the National Center for Education Statistics, and the Rehabilitation Services Administration. The agency representatives interviewed were asked to assess their agency's need for the following types of information: occupational supply and demand information, occupational characteristics information, and complementary information. The researchers discovered a considerable need for all categories of occupational agencies across the agencies interviewed. While many of the information needs expressed are routine in nature, some are one-time needs for information to compile issue papers, to provide testimony for legislative reauthorization, or to review specific complaints. The need for occupational information in programmatic or operational areas does appear, however, to be limited at the federal level. Recommendations called for further investigation of the specific information needed by the above-mentioned and other federal agencies. (MN)

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OCCUPATIONAL INFORMATION NEEDS AT THE FEDERAL LEVEL

by

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A. M. Cruze

Prepared for

The North Carolina State Occupational Information
Coordinating Committee

and

The National Occupational Information Coordinating Committee

Research Triangle Institute
North Carolina
1981

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ABOUT NOICC

The National Occupational Information Coordinating Committee (NOICC) and its counterpart State Occupational Information Coordinating Committees (SOICCs) were created by the Education Amendments of 1976 (Public Law 94-482) with a mandate to:

- Development and implement a national, State and local occupational information system to meet the common occupational information needs of vocational education and employment and training program adminstrators and planners, and
- Improve coordination between, and communication among, such administrators and planners, as well as employment security agency administrators, research personnel and others.

The Comprehensive Employment and Training Act (CETA) Amendments of 1978 (Public Law 95-524) call for NOICC to:

- give special attention to the labor market information needs of youth.

The following officials are named in the 1976 law as members of NOICC:

- Commissioner of Education[1],
- Administrator of the National Center for Education Statistics,
- Assistant Secretary for Employment and Training, and
- Commissioner of Labor Statistics.

The members of each SOICC, also specified in the law, are representatives of:

- the State Board administering vocational education,
- the State employment security agency,
- the State employment and training council, and
- the State agency administering the vocational rehabilitation program.

1/ The function of the U.S. Office of Education was moved to the U.S. Department of Education subsequent to the 1976 law.

ACKNOWLEDGEMENTS

This report is one of several products of the National Occupational Information Coordinating Committee (NOICC) produced under a grant for "Assistance in Occupational Information System Development and Implementation." This grant was awarded in 1979 to a consortium of the State occupational information coordinating committees (SOICCs) of North Carolina, South Carolina and Colorado.

The grant called for the accomplishment of four major tasks:

Task 1. Preparation of a national overview of the need for occupational information through a review of the literature, a summary of State needs assessment studies, interviews with Federal agency staff, and preparation of concept papers by recognized experts in the fields of vocational education, career counselling, CETA program planning, employment service operations and vocational rehabilitation. Reports from Task 1, including this report, are listed on p. iii.

Task 2. Development of an Occupational Information System (OIS) Handbook. This task has resulted in a three volume Handbook:

Volume 1. Occupational Information Development

Volume 2. Occupational Information Analysis, Presentation and Delivery

Volume 3. Technical Addendum

An OIS Handbook Executive Summary has been prepared as well.

Task 3. Development of training materials to accompany the OIS Handbook. The training materials include over 100 pieces of art work suitable for making overhead slides and a trainer's guide designed for use by Federal and State personnel to introduce audiences to the NOICC/SOICC network and the occupational information system.

Task 4. A training conference to introduce the OIS Handbook. Such a conference for States and territories in Federal regions 1-5 was held January 6-9, 1981, in Raleigh, North Carolina, and for those in Regions 6-10, January 27-30, 1981, in San Antonio, Texas. Participants in the conferences included representatives of the Federal and State agencies which are members of NOICC and SOICCs, and staff of the SOICCs.

Task I was carried out by Research Triangle Institute, Research Triangle Park, North Carolina. Dr. John E.S. Lawrence and Dr. Alvin M. Cruze served as project managers and authored some of the reports. Tasks 2 and 3 were performed by Program Resources, Incorporated, of Rockville, Maryland. David S. Lipstein, PRI Vice President, served as project director; Harvey Ollis was principal investigator. Task 4 was carried out jointly by RTI and PRI.

Joyce F. Kinnison, Director of the North Carolina SOICC, and Geroge E. Probst, Director of Research for the North Carolina SOICC, served as overall managers of the grant. Carol Kososki, Director of the South Carolina SOICC, and Warren W. Wolff, Director of the Colorado SOICC, provided valuable input and served as reviewers for the project.

Dixie Sommers of the NOICC staff was responsible for monitoring and overseeing the grant, under the supervision of Richard E. Dempsey. Russell B. Flanders, Executive Director of NOICC, provided general direction.

This report, one of the products of Task I, reports on an investigation of the need for occupational information at the national level carried out through interviews with representatives of Federal agencies and national organizations. The report was prepared by Alvin M. Cruze and John E.S. Lawrence of Research Triangle Institute.

Reports on the Need for Occupational Information

Concepts Papers

Occupational Information System and the Employment Security System: A Need and Resources Assessment, Charles E. O'Dell, 1980.

Occupational Information and Vocational Education: A Concept Paper, Donald W. Drewes and Gary R. Bice, 1980.

The Role of an Occupational Informatin System in Career Guidance and Counselling, Edwin L. Herr, 1980.

Occupational Information Needs for CETA Prime Sponsor Policy Making, Planning, and Program Operations, Andrew M. Sum and Paul E. Harrington, 1980.

Occupational Information System and Vocational Rehabilitation: A Concept Paper, Joseph B. Moriarty, 1981.

Literature Review

Data needs and uses of the Context of an Occupational Information System: A Review of the Literature, Nancy Paulson, 1980.

State Needs Assessment

Occupational Information Needs at the State Level: An Empirical Study of Data Needs Assessment Surveys, John E.S Lawrence and John Gross, 1980.

Federal Interviews

Occupational Information Needs at the Federal Level, John E.S. Lawrence and Alvin M. Cruze, 1981.

Final Report

Occupational Information Needs in Selected Public Agencies at the State and National Levels, John E.S. Lawrence, 1981.

Copies of Reports are available from NOICC
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OCCUPATIONAL INFORMATION NEEDS AT THE FEDERAL LEVEL

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CHAPTER 1: INTRODUCTION

I. BACKGROUND

Social and economic conditions in the last two decades in America have been characterized by fundamental changes in a number of dimensions, but particularly in the economic context of work, certain characteristics of the labor force, and in the role assigned to, and expectations of, work itself. Persistent inflation, declining growth and productivity with lagging technological innovation, and increased unemployment, particularly among youth, signify important and ongoing changes in the work environment.[1] At the lower end of the wage spectrum, legislative proposals for sub-minimum wage compensation of young workers have been developed that will, if enacted, impact entry level jobs in various ways, which include raising the level of teenage employment, while displacing some proportion of those already employed in the lowest wage occupations. On the other hand, high wages increasingly represent reduced real income due to both inflation and higher tax brackets, leading to closer attention to occupational characteristics, such as availability of fringe benefits, in making occupational choices.

The labor force in the U.S. is experiencing "great evolutionary change in its composition, its character and the rules for its conduct."[2] More adults are in the labor force, though the proportion of men has dropped. More women, more teenagers, more people combining school and work, and more older people are seeking work.[3] The average age of the labor force is rising and is expected to continue to rise, thereby increasing the number of prime-age workers, although the rate of growth overall of the labor force slowed from 1977 to 1979.[4]

Such changes in characteristics of the labor force are said to be accompanied by new attitudes towards job involvement, work values and job satisfaction.[5/] A more highly educated work force seeks more involvement in management decisions, greater flexibility in working hours, and more opportunities to choose between work, leisure and continuing education.

This climate of change is associated with considerable uncertainty regarding employment and training and educational program planning and policymaking in the public sector.[6/] In the development of a constructive set of labor market policies that are consistent in the long-term, but also adaptive enough to deal with short-term fluctuations, there is an increasing need for objective, accurate, and timely occupational information at the requisite level of detail. When formed in 1976, the National Occupational Information Coordinating Committee (NOICC) was charged with improving coordination between and communication among education and employment and training administrators, program planners and research personnel in the use of occupational information.[7/] NOICC saw as an important part of this charge a systematic assessment of user needs for occupational information in the functions of the various public agencies involved. Although individual State Occupational Information Coordinating Committees (SOICCs) have conducted their own user needs assessments, and several independent statements have been made at the national level regarding the need for certain types of occupational information for particular uses,[8/9/10/] no comprehensive account has yet been compiled of the occupational information needs specifically of the NOICC/SOICC constituent agencies (i.e. statutory members and their component agencies, see following section). Accordingly, NOICC funded a consortium of SOICCs and the Research Triangle Institute to complete such an overview through the following four activities:

1. a literature review of data needs and uses in the context of an Occupational Information System (OIS);[11]
2. an empirical study of state needs assessments for occupational information from eleven states, the District of Columbia and Puerto Rico;[12]
3. the development of five concept papers on needs for occupational information in vocational education, guidance and counseling, vocational rehabilitation, the Employment Service, and CETA;[13][14][15][16][17] and;
4. a study of Federal agency needs for occupational information.

This report presents the survey method, and results of the Federal interviews under (4) above.

II. RESEARCHING FEDERAL OCCUPATIONAL INFORMATION NEEDS

A. Purpose of the Study

In the absence of any formal research into Federal/national occupational information needs, compared with SOICC studies of OIS user needs at the state/local levels, this study was designed as a first step to fill that gap. Rather than attempting to describe the occupational needs of all Federal or national agencies using or requiring occupational information, the study was focused on a specific agency subset, as described in Subsection B below. The purpose of the study was to document in detail the specific occupational information needs of this predefined subset of agencies.

B. Definitions

Two problems were inherent in researching Federal occupational information needs. First, several different terms are used synonymously with occupational information (e.g., labor force data, manpower data, labor market information), necessitating a common definition for the purposes of this study. The OIS Framework Document[18/] was used as the standard reference both for its definition of occupational information as "information related to occupations or to the training relevant for occupations," and its categorization scheme for division of data elements of information into five major categories:

-- occupational demand
-- occupational supply
-- occupational characteristics
-- complementary information
-- supply/demand information.

Second, as the National Commission on Employment and Unemployment Statistics noted, "the nation is served at present by a broad system of labor market statistics, compiled under different procedures by diverse sources." (p.28).* Most Federal agencies collect, disseminate, or use at some time or other information relevant to occupations, and thus may be expected to have a need for occupational information. Primary users of systematically provided occupational information are identified, however, as "vocational education program administrators and manpower program administrators" in the 1976 legislation, and are restricted in that Act to executive agencies within the office of Education and the Department of Labor at the national level. The term "Federal agencies" is applied, therefore, in the present context only to those agencies directly within the NOICC Technical Steering Group (TSG) statutory member jurisdiction, i.e., Bureau of Labor Statistics (BLS), Employment and Training Administration (ETA), National Center for Education

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*Counting the Labor Force, 1979.

Statistics (NCES), the Office of Education (OE)--more recently the Education Department--, and the Rehabiliation Services Administration (RSA),* or companion advisory groups or professional associations. While it is recognized that Federal agency needs for these kinds of information may go well beyond this subset--a major conclusion of this report addresses the extension of this assessment to other Federal agency users--the current effort has been logically directed at the NOICC constituent agencies.

C. Overview of the Report Structure

The remainder of the report is divided into three sections: Chapter 2 outlines the methods by which the current study was conducted, describing how respondents with agencies were selected and contacted, how the interviews were conducted, and how the data were analyzed. Chapter 3 presents the results of the study by information category within each of the five clusters of respondent agencies, BLS, BOAE, ETA, NCES and RSA. Finally, Chapter 4 presents a summary of findings by agency, followed by conclusions from the study.

Because the report is somewhat long and detailed, a summary table of data needs is provided in Table 2 in Chapter 4. Those readers wishing for an overview of federal/national needs will find it in Chapter 4. Chapter 2 is the methodology chapter which can be skipped by all those not interested in how this survey was conducted. Chapter 3 is the detailed agency-by-agency profile of need by information category. To facilitate reference, it is indexed by agency in the Table of Contents, permitting the reader to identify readily and access those agencies she/he wishes to look at in more detail.

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*In addition to the four TSG statutory agencies, a representative from the Rehabilitation Services Administration works with the TSG as a complement to the legislative requirements for vocational rehabilitation representation in SOICCs.

CHAPTER 2: METHOD

The method of assessment of Federal needs for occupational information was conducted in four stages: (a) selecting the respondents, (b) contacting the respondents to inform them of the purpose of the study, (c) conducting the interviews, and (d) analyzing and reporting the results, with opportunities for review by participating agencies.

I. SELECTION OF RESPONDENTS

The staff of NOICC identified the set of individuals to be interviewed by requesting members of the TSG, as well as the RSA representative to select offices and people within their agencies who were most appropriate to speak to the occupational information needs of the agency. Table 1 contains the individual offices within the five agencies or other organizations at the Federal level that were selected by this method.

As Table 1 shows, two of the respondents were located outside these four agencies and RSA. These were the American Vocational Association (AVA) and the National Advisory Council on Vocational Education (NACVE) both suggested by OE/BOAE* as having important national perspectives on vocational educational needs for the purpose of this study. AVA and NACVE represent a national, rather than a Federal perspective on data needs, hence the references to "Federal/national" in Chapter headings or subheadings throughout this report.

Individuals selected by the above method chose the members of their staffs to be included in the interviews, so that in all, 49 respondents from 29 different offices or agencies were eventually contacted and interviewed. A list of respondents by agency is attached in Appendix A.

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*Because so many acronyms are used in referring to different Federal agencies and their programs, a list of acronyms and their referrents are included in Appendix C.

Table 1

Organizational Subunits within Agencies, Dates of Interviews and Numbers of People Interviewed

Agency/Organization	Office	Date of Interview	No. of People Interviewed
Employment and Training Administration			
Office of Investigation and Compliance	Division of Equal Employment Opportunity	8/12/80	1
Veterans Employment Service	Technical Services National Services	8/5/80	3
Office of Administration and Management	Division of Information Analysis and System Dev.	8/26/80	1
Office of Policy Evaluation and Research	Office of Policy and Planning	8/15/80	1
	Division of Planning & Policy Analysis	8/15/80	1
	Division of Legislation & Program Development	8/15/80	1
	Division of Labor Market Information	2/20/80	2
	Office of Program Evaluation	8/26/80	1
Bureau of Apprenticeship and Training	- - - -	7/3/80	1
Unemployment Insurance Service	Division of Actuarial Services	8/5/80	1
U.S. Employment Service	Office of Program Services	2/27/80	3
	Office of Technical Support	2/27/80	1
Office of Comprehensive Employment Development	Office of Community Employment Programs	8/26/80	1
	Division of Program Review	3/11/80	2

Table 1 (continued)

Agency/Organization	Office	Date of Interview	No. of People Interviewed
Office of Work Incentive Programs	- - - -	3/14/80	1
Office of Youth Programs	Division of Program Planning and Design	3/19/80	2
Office of National Programs	- - - -	9/4/80	1
Bureau of Labor Statistics			
Office of Economic Growth and Employment Projections	- - - -	2/7/80	3
Office of Employment Structure and Trends	- - - -	2/7/80	1
Office of Education*			
Bureau of Occupational and Adult Education**	Office of Deputy Commissioner for Occupational & Adult Ed.	2/26/80	1
	Div. of Occupational Planning	2/26/80	1
	Div. of State Voc. Prgm. Oper.	2/26/80	2
	Division of Vocational & Technical Education	2/26/80	3
American Vocational Association	- - - -	4/29/80	1
National Advisory Council on Vocational Education	- - - -	4/15/80	2

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* Office of Education, Department of Health, Education, and Welfare, as of the date of these interviews (February, 1980).

** Since these interviews were conducted, this has become the Office of Vocational and Adult Education (OVAE) within the Education Department (ED).

Table 1 (continued)

Agency/Organization	Office	Date of Interview	No. of People Interviewed
Rehabilitation Services Administration			
Office of Program Development	- - - -	2/23/80	3
Office of Program Operations	- - - -	2/23/80	3
National Center for Education Statistics			
Division of Post-Secondary and Vocational Ed. Statistics	- - - -	2/21/80	4
Division of Elementary and Secondary Ed. Statistics	- - - -	2/12/80	1

II. CONTACTING RESPONDENTS

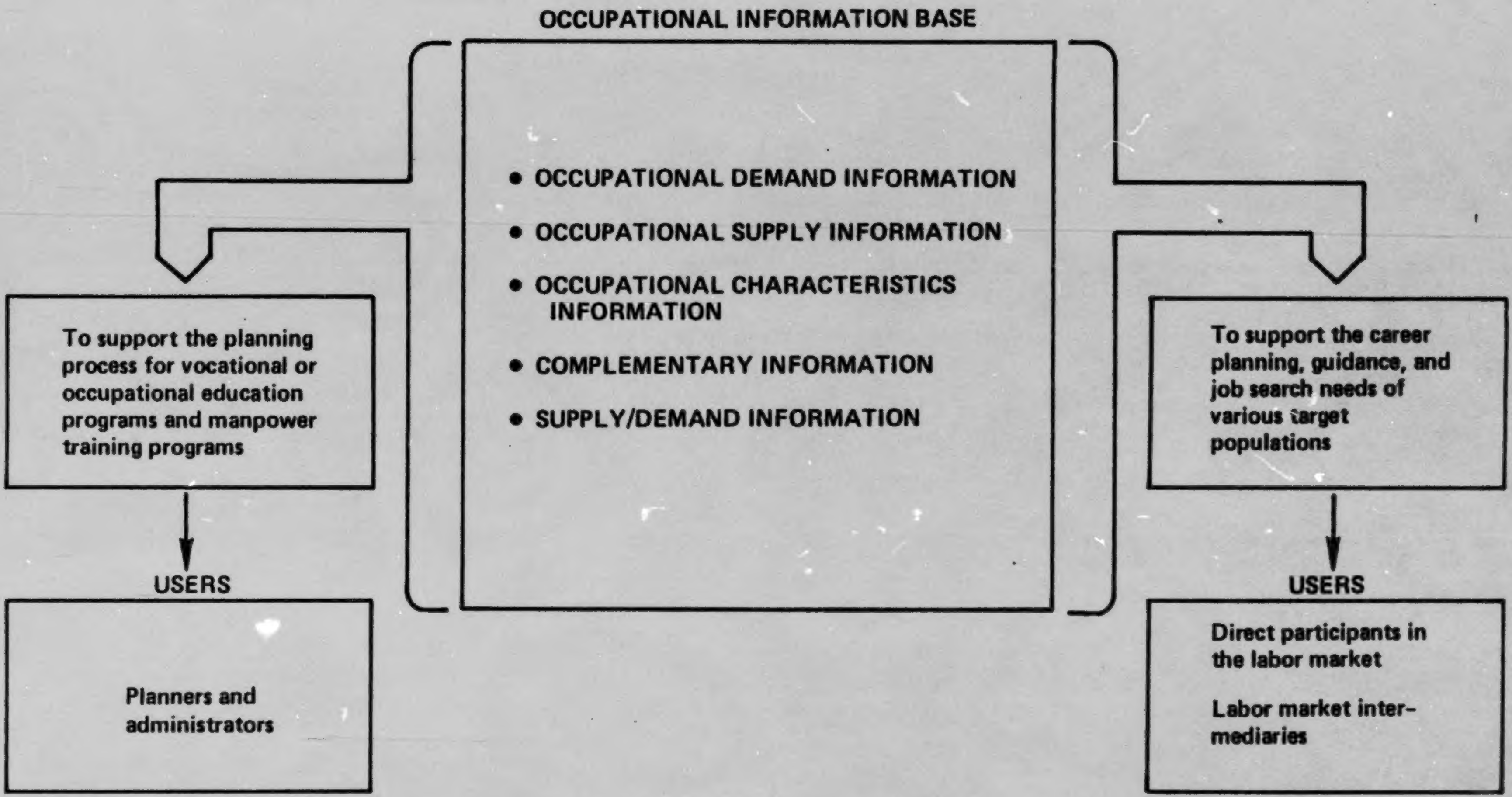
Each respondent was contacted either in writing or by phone by NOICC staff prior to RTI staff setting up specific appointments. The purpose of the interview was outlined in the context of the overall study of needs for occupational information. The interview focus was characterized as being on occupational information needs relevant to carrying out functions and responsibilities of the agency. It was also indicated that interviewers would seek to obtain an understanding of major programs or policy decisions made in each relevant agency subunit and the types of occupational information needed for these activities or decisions. For each type of occupational information needed, interviewers would be asking for such details as: how often data are needed, in what geographic and occupational detail, and how specific information is used. In addition, the initial contact referenced the Framework Document, (copies were made available to all of the contacted agencies) and to the five major categories of occupational information in the Framework Organization (see Figure 1). A copy of a data element matrix to be used for organizing the interview was sent to each respondent, along with a list of occupational information items as exemplary of each of the five major framework categories (see Appendix B). Finally respondents were contacted by RTI staff and a specific time and date for the interview established.

III. CONDUCT OF THE INTERVIEWS

Interviews were conducted in person in the offices of the respondents, who were asked if they objected to an audio tape recording of the interview. A semi-structured interview technique was used, with all

FIGURE 1

FIVE OCCUPATIONAL INFORMATION CATEGORIES IN THE OIS INFORMATION BASE AND THE TWO MAJOR USES OF OCCUPATIONAL INFORMATION



OCCUPATIONAL INFORMATION BASE

- OCCUPATIONAL DEMAND INFORMATION
- OCCUPATIONAL SUPPLY INFORMATION
- OCCUPATIONAL CHARACTERISTICS INFORMATION
- COMPLEMENTARY INFORMATION
- SUPPLY/DEMAND INFORMATION

To support the planning process for vocational or occupational education programs and manpower training programs

USERS

Planners and administrators

To support the career planning, guidance, and job search needs of various target populations

USERS

Direct participants in the labor market

Labor market intermediaries

interviews following a similar general structure. Respondents were asked to:

- outline agency organization, mission and objectives,
- specify functions relating to the objectives that might require occupational information to discharge,
- classify occupational information needed by high/low need by Framework category,
- state data elements needed, where applicable, within category by data characteristics (occupational or geographical detail, time-frame, frequency, etc.)
- indicate the uses to which these data are or would be put, and the advantages to the agency of using the data.

A table shell of the data element matrix used to organize the data from the interviews is included in Appendix B. Current agency budget statements for FY 1980, and the NOICC review of Federal Programs[19/] were used to assist RTI interviewers in familiarizing themselves with agency and component subagency mission and functions prior to the interviews. The emphasis during the interviews was on needs for occupational information in current agency functioning. Interviews were planned to take an average of about one and a half hours, with an anticipated range of one to three hours.

IV. ANALYSIS AND PRESENTATION OF RESULTS

Subsequent to the interview, each interview tape was replayed by the interviewer, and an individual working paper was prepared summarizing each interview, and including a data element matrix for those respondents who provided sufficiently detailed indications of need. Since one of the purposes of this research was to present as accurately as possible a picture of TSG agency occupational information needs, an initial draft of this report was prepared and sent for review to all respondents. Because of changes in personnel within agencies, and, for example, major changes in agency organization such as in BOAE, not all actual respondents were able to review the document. Each responding agency was, however, given the opportunity to correct or clarify their section of the report.

The next section, therefore, contains; first, a brief critical consideration from the authors' perspective of factors affecting overall occupational information needs at the Federal level, and second, a detailed synthesis of the occupational information needs within the specific agencies interviewed. To facilitate review by the appropriate agency staff, and to ensure accuracy of representation of need within each organizational subunit, each of the four TSG agencies, and RSA, AVA, and NACVE occupy separate subsections of the report. A brief summary of agency function is followed in each subsection by documentation of the need. No attempt has been made to prioritize need across or within agencies, since to do so would have necessitated more formal instrumentation. Furthermore, the order in which agencies appear is not intended to imply any kind of ordinal categorization of need priority.* TSG agencies are presented in alphabetical order (AVA and NACVE are included with BOAE) followed by RSA.

The specificity of responses varied considerably across agencies. Some of the agencies more familiar with the terminology were fairly specific down to the data element level. Others were even more general than the five major Framework categories of occupational information level of specificity. Each agency and subunit is, therefore, reported at the level of detail emerging from the interview, with, in general, the Framework categorization format followed throughout.

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*Neither is the predominance in numbers of ETA interviews in this paper, which arose solely as a function of intra-agency selection procedures of organizational subunits to be interviewed.

Throughout the text, direct quotes are used, where available, from the taped interviews, to phrase the stated need as nearly as possible within the perspective of the individual responding. While the quotes are accurate representations of actual statements, it should be emphasized that the selection of the quote for publication was performed according to the authors' judgments. As indicated above, opportunities for review were extended to all responding agencies. It should be noted, however, (see BOAE section below) that because some agencies have been extensively reorganized since interviews were completed, quotes should be viewed as individual responses, and not necessarily representative of official agency policy.

Finally, this report focuses exclusively on identifying needs for occupational information for particular agency functions, and is not concerned with availability of information at this time to meet such needs.

CHAPTER 3: RESULTS

I. FACTORS AFFECTING THE NEED FOR OCCUPATIONAL INFORMATION AT THE FEDERAL LEVEL

Before presenting empirical evidence of various needs for information in the agencies studied, it is important to set these needs in the context of two key factors which influence both perception of need and use of occupational information in these agencies.

First, a user/producer distinction appears across agencies and in particular, agency functions, with regard to how data are examined. Although even information-producing agencies can be characterized as "users" in one sense, in that raw data are needed from states and localities in the Federal/state cooperative programs of ETA and BLS for example, there is a difference in kind between the use of data for generating specific products (e.g., Occupations in Demand, or the Occupational Outlook Handbook) and for program review, policy decisionmaking or allocation of resources. In the first case, the data are "used" in a secondary sense, as they are prepared and published for, as in the second case, more primary use by ultimate users generally in other agencies. Therefore, the agencies in this study fall into two groups: "producers" of occupational information, which includes BLS and some respondents in ETA and NCES, and "users" of occupational information, which includes CETA agencies within ETA, and vocational education and rehabilitation respondents. The needs of both groups tend to be different in several ways, and these distinctions should be recognized in interpreting the findings of this study. "Producer" needs for occupational information are more specific, routine, and technical in nature, tend to be explicitly related to organizational mission and function, (i.e. data dissemination activities) and may not be related to ultimate use of the data for policymaking or programmatic decisionmaking within that same subunit or agency.

"User" needs, on the other hand, vary considerably from agency to agency in terms of specificity, frequency and technical detail, but tend to be either programmatically operational in focus (CETA, vocational education or rehabilitation) or strategic for long-term planning or policymaking. In general, also, the "producer" agencies have in-house technical staff who are intimately knowledgeable about the information, its limitations and utility, despite the fact that the information will eventually be used elsewhere. "User" agencies tend to be less knowledgeable about the technical details of data collection and dissemination in general, and often lack the resources to be able effectively either to identify or interpret information that is most needed for use within their own agencies.

Second, two of the three "users" in the NOICC context--CETA and vocational education--are for different reasons decentralized from the Federal down to the state and local levels in terms of both needs for, and use of occupational information. The major objectives of CETA are to provide training and to improve employment opportunities for the economically disadvantaged and for the unemployed and underemployed. To accomplish this end, the strategic objective is to place the administration of CETA programs with local authorities and to permit them to select programs appropriate for local needs.[20/] Accordingly, since CETA programmatic decisionmaking is statutorily located at the local level, Federal needs for occupational information in these agencies other than for program review, or for overall policy development might be expected to be limited. In addition, states are primarily responsible for education of their residents, and current policies of many state vocational education agencies encourage local autonomy regarding the delivery of vocational education. On average, less than 15 percent of total vocational expenditures are financed by Federal funds. As a consequence, Federal needs for occupational information in programmatic decision-making for vocational education may be expected to be less than at the state and local level. Since this report focuses on Federal (or national-level in the cases of AVA and NACVE) needs, therefore, the predominant "user" needs documented in the following sections should not be expected to be programmatic in the case of CETA and vocational education, but policy-oriented and strategic in the main.

II. NEEDS FOR OCCUPATIONAL INFORMATION IN FEDERAL/NATIONAL AGENCIES

A. Bureau of Labor Statistics (BLS) Office of Economic Growth and Employment Projections, and Office of Employment Structure and Trends

1. Introduction

The Bureau of Labor Statistics, as the principal fact finding agency in the Federal government in the field of labor economics, has a dual mission regarding occupational information.

a. To provide current and projected occupational information to permit a sound basis for training, economic and social policy, and making business, labor, social programmatic, counseling and individual career decisions, and to provide occupational data for relevant analyses, by other offices or agencies.

b. To serve the specific, program needs of the Department of Labor regarding occupational information.

In addition, BLS serves the occupational information needs of other public agencies as well as the private sector. BLS collects, analyzes and disseminates a wide variety of employment and unemployment statistics, both current and projected. Much of the Bureau's data are gained from surveys, conducted by its own field staff, by the Bureau of Census on a contract basis, or jointly by BLS and cooperating state agencies.*

The two offices for which representatives were selected by the TSG for interviews were the Office of Economic Growth and Employment Projections, and the Office of Employment Structure and Trends. Although beyond the scope of the current study, interviews with a number of additional staff personnel were recommended by respondents in these two offices during the course of this project.

The Office of Economic Growth and Employment Projections focuses on the longer term occupational outlook, and develops medium- and long-range economic and employment projections. Specific programs or activities include:

- -- long-range projections of the labor force by age and sex and of educational attainment of the labor force;
- -- the national/state industry-occupation matrix system** reflecting, for a specific time period for each state and the District of Columbia, total employment in specific occupational categories, cross-classified by industrial sectors and class of worker categories;
- -- the state and area occupational projections program** which assists state employment security agencies in developing estimates and projections of occupational requirements at state and local levels;
- -- the occupational outlook program which provides detailed information biennially on characteristics of several hundred occupations and 35 major industries.

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*For detailed information on BLS major programs providing occupational information, see Major Programs 1978 Bureau of Labor Statistics Report 521, U.S. Department of Labor, Bureau of Labor Statistics, 1978.

**Current plans are that BLS will only be involved in developing a national matrix as of FY 1982.

The Office of Employment Structure and Trends develops comprehensive data on the labor force, including information on nonagricultural industry wage and salary employment, labor turnover, state and local area unemployment, insured unemployment and employment by occupation and industry. Specific surveys include:

- the Occupational Employment Statistics Survey, which collects data on employment in approximately 1650 occupations in non-agricultural industries in 49 states and the District of Columbia;
- the Current Employment Statistics Survey (BLS 790) of a sample of 160,000 employer units, covering 39 percent of total estimated employment for each state and 236 substate areas; and
- the Labor Turnover Statistics Survey (BLS 1219) of a sample of approximately 40,000 employer units in the manufacturing sector and some mining and communications industries in 47 states and 100 substate areas.

Local area employment and unemployment statistics, characteristics of the insured unemployed (ES 203) and insured employment and wage data (ES 202) are obtained monthly* through Federal/state cooperative programs.

Although BLS is usually cast more in the role of a producer than a user of occupational information, BLS agency personnel see themselves as "probably (needing) more occupational information than any other agency of government" in terms of reliance on secondary data sources even in their role as producers of information. Most of the BLS programs already referred to need occupational information directly as input. BLS, however, uses information as a "raw material" for its final products analogously to a production industry. It does not, however, routinely use the information for internal policy or operational decisions, i.e., to allocate scarce resources within its own organization. Rather, it requires and uses occupational information both for routine and special analyses in terms of the products the agency generates. In this sense, BLS is a major component in the process of the flow of information from producer/source to ultimate user. The agency also provides technical assistance to both data collectors and users in promoting the collection of quality data, processing, analyzing, formatting, and interpreting the results. Furthermore, BLS is in a position to respond to nonroutine requests for information from Congress, or other agencies.

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*ES 202 is monthly data reported quarterly.

BLS programs are not operated under umbrella legislation, but rather under several separate legislative acts. Therefore, specific needs for occupational information vary considerably within BLS, depending on the particular use to which the data are put. For example, employment by industry data, collected monthly in the BLS 790 program, may be adequate for other BLS offices on an annual or even a biennial basis.

The picture of need given by the selected BLS representatives interviewed, of necessity, gives only one, though an important one, of a number of perspectives within BLS. The need should also be qualified by a number of operational constraints, such as, for example, (a) the perceived need of the ultimate user (e.g., higher education planners, who tend to be interested in occupational information only in fairly narrow ranges of occupations such as teaching)*, (b) cost effectiveness of data collection versus the analyst's need to have optimum data (e.g., OES data on occupational demand by industry might ideally** be made available annually, instead of triennially for each industrial sector, to provide more timely descriptions of the occupational environment, but resources are currently unavailable for that kind of schedule), and (c) considerations of the concerns of the source providers of data (e.g., although educational and employment and training program planners may not need occupational detail below some level of occupational clusters for their program development needs, reporting establishments (industries) from an operational point of view find it easier to recognize and report occupations by individual occupational title/code than by cluster).

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*It was felt that a lot of users (higher educators for example) express needs for occupational information only on a few occupations (e.g., teaching occupations), and thus, confine their scope while still wanting considerable detail. To the extent that potential users have needs for data on specific groups of occupations, quantification of the scope of these needs would be "extremely useful."

**"Ideally" from the point of view of the user, although this schedule is considered neither practical nor cost-effective from the BLS point of view.

Because of the unique position of BLS in the Federal flow of occupational information, its needs are difficult to present in comparable format to other program-oriented agencies. Moreover, it should be emphasized again that the profile of occupational information need is that expressed only by the two offices within BLS identified above. What follows, therefore, is an outline of the need, by major framework category, of those organizational units--within the principal labor economics statistics agency of the Federal government--that are primarily concerned with occupational information.

2. Demand

The need for all categories of occupational demand data is high in BLS, with the possible exception of job vacancy statistics. Replacement demand is particularly important because it is estimated that two out of three job openings arise through people leaving the labor force. Although occupational transfers are included in the current framework under supply data, they can also be considered in the occupational demand category, since every time a person is transferred, a job opening is created. This may be "the most important of all" demand data despite the fact that "right now this is not in any analysis done by anybody," because it is conceivable that more jobs are created by transfers than for any other reason in certain occupations (e.g., parking lot attendants).

Three clearly identified sets of users were defined for which occupational demand information is needed: (a) educational planners and training personnel, (b) individual counselors or students, and (c) other Federal agencies needing occupational information to make planning decisions (e.g., location of new sewage treatment facilities or implementation of mass transit systems relative to existing occupational demand).

The degree of geographical detail varies depending upon the use to which the data are put. Confidentiality restrictions tend to constrain the publication of industry/occupation demand data (OES) below the state level. For BLS purposes, national data are needed, but other users need more geographical detail for both current and projected demand data.

The approximately 1,650 occupations in the OES survey are seen as "a reasonable compromise" in occupational demand specificity for most uses. Problems would arise for example, in projecting these occupations in much greater detail, for individual states, since it is difficult to project occupations with low employment with any reliability. Thus, occupational detail, in general, needs to be great enough in each case to permit optimal utility and reliability. While current occupational demand data "would be nice to have annually" or possibly two or three times a year for agricultural or farm production occupations, resources (time, money, techniques) and user expectations mediate against this degree of frequency. There is some agreement that increased frequency is generally more desirable, the considerations being primarily cost versus utility. From a practical point of view, priorities are necessary, and it was suggested that good data on occupational mobility might be preferable (in terms of allocation of scarce resources) to annual estimates of occupational demand. In short, the need is more acute for some of the types of occupational information for which no data are currently available (e.g., occupational mobility) than for refining data that are currently available. Current estimates of replacement demand in the OES program, for example, include replacements only for labor force separations due to death and retirement and do not include estimates of the number of job openings due to geographic and occupational mobility, a shortcoming BLS would like to remedy if additional resources were available.

The optimal demand projection period for BLS needs is five to ten years, although the staff understood that other users of BLS information may express shorter term needs for immediate planning. The current Occupational Outlook Handbook (OOH), for example, is based on projections for 1990, and between year projections can be derived by technical interpolation, although BLS for technical reasons, cautions against this.

3. Supply

The need for occupational supply data was not so clearly defined. It was pointed out that potential labor supply for a given occupation can be manipulated considerably as a function of such factors as wage levels and working conditions. BLS needs and currently uses supply data from NCES related to (a) occupations requiring high levels of skills, and (b) current and projected enrollments for educational programs. A high need was cited for follow-up studies of leavers and completers of educational programs and a critical need for additional information on patterns of occupational transfer was retained.

Occupational transfer data are both perceived as a high need and also a "data gap" area at the present time. Numerous research efforts have been directed by BLS at the occupational mobility phenomenon, but little information is routinely provided by BLS to other data users on this aspect of occupational supply. BLS currently perceives information on occupational transfers as needed..."to accurately describe movements into, out of and within the labor market." Data on new entrants, for example, on mothers returning to the labor force after childbearing, are currently used in the working life tables but in a different BLS office from those represented in this study. In addition, commutation, or the travel patterns of labor force participants to and from work, "is a major factor when you are talking about states and areas. We get a lot of requests for data, for example, on D.C., New York City...if you look at who is living [there] versus who is working [there], there is a phenomenal difference." The information is important to planners and research groups at both state and local levels, particularly when commutation takes place across state lines or between major metropolitan areas. Information is needed on follow-up of education/work experience particularly as it relates to patterns of occupational entry. Finally, a relatively low need was expressed for data on qualified currently unemployed persons, except where large pools of such unemployed workers emerged at one time.

Geographical detail for supply data is needed at comparable levels to occupational demand data, i.e., national, state, SMSA and LMA, with the exception of commutation data which needs to be at greater levels of detail (e.g., county) to adequately discriminate place of residence from place of work.

Occupational detail is difficult to prescribe for supply data. Ideally, supply data might be available by OES or census code occupation (e.g., accounting) for some occupations or occupational clusters. Most supply data are realistically available only by education or training program for obvious reasons, however. As far as data frequency is concerned, BLS estimates that supply data are needed by educational planners at least annually. Supply projections data are not routinely needed by BLS, except on occasion in specific areas, e.g., projections of earned degrees, given to BLS by NCES.

4. Occupational Characteristics

Occupational characteristics data were judged as highly needed with clearly less emphasis on frequency, since, with the exception of wage data, rates of change in job characteristics data tend to be slow. The utility of these data was seen as primarily for vocational guidance personnel and individuals seeking personal information to guide occupational choice. For example, wages, working conditions, educational requirements, career ladders and lattices are needed for the Occupational Outlook Handbook. Currently missing from the OOH approach, and therefore needed, is direct information on how to go about getting a job. Although all data elements are currently needed, in particular information on major employers and hiring channels were seen to be important for guidance purposes at the local level.

Except for earnings and benefits, licensing and registration requirements, demographics of workers, and major employers, occupational characteristics information is only needed in geographical detail to the extent the data differ by region or geographic area. Occupational detail is needed down to the specific Census or OES occupational code with the exception of career ladders and hiring channels, for which broader occupational categories will suffice.

5. Complementary Information

Certain kinds of complementary information were also seen as important, and although well presented in some Career Information Systems (CIS), on the whole such information is not currently available in such a way as to reach those who need the information most: "The programs aren't in place to get (this information) down to the kids." With the exception of information on labor force demographics and trends, needed by Federal agencies and private firms having to react to EEOC regulations and guidelines, and CETA planners using this information for program targeting decisions, BLS does not see a high need for itself, for example, for lists of education and training programs, or financial aid programs. BLS anticipates a higher need in the future for demographic information to tie into state and area demand projections in order to provide more complete information on labor force trends in states and substate areas. BLS would also like to be able to provide more comprehensive information on the extent to which OOQ or OOH analyses extend to similar or related occupations, "identifying occupations that are related, or which you can enter having the same education/experience/background." Geographical detail for this information for BLS purposes does not usually need to be finer than the state, or occasionally SMSA level, and occupational detail is not particularly important for these data elements.

6. Supply/Demand Information

In the final category of occupational information (supply/demand analysis), classification structures for coding supply and demand data were perceived as essential, along with their appropriate crosswalking schemes. From the BLS perspective, the ability to perform adequate supply/demand matching hinges on the availability of good supply data, since this is the area for which BLS has the least comprehensive data. The most needed data elements for supply/demand analysis were defined as: number of completions from educational and training programs, patterns of entry into occupations, mobility within occupations, and movement into and out of the labor force.

A need was expressed for adequate information to be provided to educational planners and others involved in supply/demand analysis concerning the intransigencies of adequately modelling the supply/demand picture, and the inadequacies of mere one-to-one supply/demand matching of training outputs to specific occupations. The complexity of career lines and intraoccupational mobility makes such simple approaches suspect if used without reference to more complex considerations. For example, if, on the average, of every hundred students trained in a given program, only ten find immediate employment in a related occupation immediately upon leaving the program, it does not necessarily follow that the training of the others is therefore useless and should be discontinued. Eventual employment may occur in an occupation related to the training that may be more successful if some other employment experience, unrelated to the training, precedes it. A great understanding is therefore needed by planners of the way the labor market is actually working, and of the analytical techniques necessary to understand and predict those mechanisms.

Good supply/demand data at the national level were seen as having several advantages:

- assisting individuals in occupational decisions;
- assisting in national policy decisions, identifying potential bottlenecks relating to particular occupations;
- highlighting potential problems in the national labor market; and
- assessing national priorities in employment and training planning.

Few formal attempts are currently being undertaken by government agencies to accomplish this kind of national supply/demand analysis, although exceptions are current National Planning Association efforts and sporadic attention to specific industry supply/demand patterns, e.g., construction.

B. Bureau of Occupational and Adult Education (BOAE),* American Vocational Association (AVA), and the National Advisory Council on Vocational Education (NACVE)

1. Bureau of Occupational and Adult Education

The goal of the Federal effort in occupational, vocational, and adult education is to bridge the gap between education and work such that all Americans will have the skills and training required to seek and secure gainful employment. The Federal strategy in pursuit of this goal has been to act as a catalyst by assisting states in improving and extending their vocational and adult education programs. Insuring access and opportunity is furthered by targeting financial resources on programs for the economically disadvantaged, the handicapped, those who are of limited English speaking ability, and other groups experiencing severe educational need.

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*Since the conduct of these interviews, this has become the Office of Vocational and Adult Education (OVAE). Thus direct quotes may be attributable to individuals no longer within the agency and should not be interpreted as representing OVAE.

Specifically, the FY 1980 BOAE mission is "to foster extension and improvement of Adult and Vocational Education and special programs through defining, clarifying and administering the Federal role and promulgating policies necessary for implementation of appropriate strategies at the state and local level." The goals of BOAE have been to provide equal access to all BOAE programs, to optimize coordination and utilization of resources at the Federal, state and local levels for all BOAE programs, to achieve high quality in all BOAE programs, and to improve the efficiency, and effectiveness of Bureau management. Several priority initiatives were identified for the Bureau for FY 1980 which included reducing youth unemployment, facilitating access to vocational education programs by minorities, women and the handicapped, and increasing worker productivity through continuing and adult education. Eight BOAE functions were identified as needing occupational information of some kind:

-- policy development, interpretation and analysis,
-- internal management,
-- coordination with other programs,
-- national discretionary projects administration,
-- state formula grants administration (the major function judged by scope and dollars),

-- program information and analysis and program evaluation and follow-up,

-- program improvement and support, and

-- new program initiatives.

In performing these functions, BOAE services states primarily, not localities or regions. BOAE has two major state grant programs--Vocational Education and Adult Education, and a charge to provide supportive services and technical assistance to states to improve the quality of and access to local programs of vocational education.

Of the eight BOAE functions, all except internal Bureau management were perceived as ideally needing occupational information of some type in their performance, and occupational information needs were generally of two types. The first is a policy-oriented need expressed by the senior administrators within the agency. The second is a more operational set of requirements which fall more nearly into the detailed technical categories of the Framework Document. Each of these two categories of need are dealt with separately here, with a discussion of the policy-oriented perspective first, followed by a more detailed 'Framework' treatment of the second perspective.

From the first perspective, the need for detailed occupational information was seen as reserved primarily at the local level, with the national need being more of a general requirement than that represented in the current OIS framework. Administrative shifts in the bureaucracy of Federal education, with associated emphases on improved program management, are expected to generally increase the need for these kinds of occupational information, "not just supply/demand information.... but other kinds of data that are...more critical to us, the characteristics of jobs especially as we change technologies, as we move into more or less new areas such as energy..."

The Federal BOAE roles with regard to states is seen as twofold: (a) administering current law, and (b) planning for the immediate future. The extent of Federal direction of state vocational education programs is limited because of the small Federal contribution, compared with state and local, to the total vocational education dollars (about 10 percent). Since the largest share is local, the major planning decisions will be made locally. It then follows that Federal direction in terms of occupational information will be provided only on major national shifts and trends in supply and demand, e.g., the shift from the manufacturing to service sector occupations. Furthermore, vocational education instruction is not perceived as DOT-code specific, but much more broadly gauged and aimed at developing a more adaptable workforce. Highly detailed information is of less use at the Federal level in planning, "the big shifts are important...the prime users in terms of making programmatic change are the state and local levels."

Nationally, BOAE is becoming more sensitive to the shifts in occupational supply and demand especially for young adults moving up the career ladder and needing retraining and upgrading. Corresponding increases in emphasis upon post-secondary vocational education have important implications for data use. "At the post-secondary (level) ..... the consumer [himself/herself] needs to know...so occupational information at the guidance and counseling level...is extremely important." Again, the focus for these data users was seen as largely at the state and local level. The Federal role is usually to stimulate state and local administrations to look at the data, rather than to perform occupational information analyses for them except in terms of identification of overall national trends. Federal review of state plans for example is limited in scope to monitoring for relatively large errors in supply/demand calculations. "We are just trying to look at their programs in terms of job access... we're just not in a position to second guess a state agency."

Many of the larger national issues facing vocational education as major administrative priorities at the Federal level are seen as stemming from a presidential initiative, (e.g., strengthening two-year technical programs at black colleges) on the basis of "generalized information for which we frankly...need very little technical, specific...data to support." These priorities do not surface through the state plans. "The state plans don't tell us that much even in their aggregate, about what the big issues are." Rather, for long-term planning issues, BOAE looks to a variety of agencies including not only NACVE, AVA, NOICC, NCES, but also for example, the Office of Technology Assessment of the Congress, the National Manpower Institute, and the National Commission on Employment Policy. BOAE has 23 working interagency agreements with other Federal agencies, directed toward the Federal need for more targeted basic research data on specific empirical information to support policy decisions. These information-gathering efforts may be one-time, such as a major study to examine the relationship between the Basic Skills program and vocational education; or ongoing and routine, such as the rural education program which is dependent upon information from the U.S. Department of Agriculture.

Another need in this regard was identified as a greater agency analytical capacity. BOAE is currently exploring ways to systematize its needs for in-house data analytic capabilities, as well as for automated data systems on-line to decisionmakers. In the best of all possible worlds, the data would be readily available to inform those responsible for preparing major policy initiatives.

Additional areas of data that are needed are short- and long-term follow-up studies as well as cost-benefit estimates illustrating the actual work experience of vocational education program graduates and the cost effectiveness of the training. A key data item in this regard was considered to be tax dollars paid. A state may regain the costs of operating a program through state and local income taxes from work performed within the state by program graduates. These kinds of data can be useful in defending vocational education programs to Congress and in assisting in better targeting of the Federal vocational education dollar.

The above data needs are expressive of the more general issue-oriented requirements for information as requested by policy decisionmakers within BOAE. From the second perspective, that of the directly program-oriented staff, for example, of the Program Support Branch tended to be more operational and detailed.

Demand data are seen as needed to respond to Congressional inquiries, and to assist states in program development and administration. Specific uses for demand data by occupational cluster are for administrative memoranda, or in workshops or conferences, to provide program leadership, or to stimulate applied research. Data are usually not needed below the state or occasionally substate area level of geographical detail and are needed at the level of occupational aggregation for which relevant educational program data are available. Data are needed approximately triennially to coincide with three-year planning cycles, and projection timeframes are perceived as three to five years for short-term and 10 years for long-term.

Supply data are highly needed as one index of performance of vocational education programs. Subclassifications of enrollees are specified as important, such as number of minority and handicapped students enrolled. Geographical detail needed is most usually by state, and broad urban/rural substate classification. Occupational detail and functions for which the data are used are similar to those for 'occupational demand', and the frequency is 'annual' for supply data in general, and for breakdowns of numbers of minority and handicapped enrollments.

Occupational characteristics data again are seen as mostly needed at the state and local levels. However, certain kinds of occupational characteristics data might be provided to states in planning for guidance and counseling programs. In addition, a Federal role might be to assist in the dissemination of information on, for example, licensing and registration requirements across state lines in cases where immediate job markets transcend state boundaries.

Complementary information is needed to assist Federal vocational education administrators in responding to requests from states or advocacy groups, and as part of a Federal monitoring function to ascertain whether the vocational education needs of specific target groups are being met. A strong case was made for complementary information in the form of special studies of specific occupations (e.g., energy-related occupations to determine characteristics of demand for these occupations as related to projected supply from existing training programs) or the current vocational education needs of special groups (e.g., Hispanics).

Finally, a need was expressed at the Federal level both for the results of supply/demand analyses at the level of occupational detail for which program data are available and also for information on methods of supply/demand analysis to permit critical appraisal of supply/demand data. While it is not anticipated that BOAE at this time would conduct its own supply/demand analyses, it could use the data and would need the capability of intelligently judging the quality of the data as received. Agency functions served by this provision of information would include ongoing management review of individual states, the provision of leadership to states in program administration and development, and response to Congress during the process of priority determination.

2. American Vocational Association (AVA)

The AVA performs five major functions, including:

-- creating a constructive public policy to enable vocational education to perform its functions,

-- assisting in the professional and technical development of vocational education,

-- providing leadership to programs and institutions "on the cutting edge of vocational education,"

-- delivering services to AVA members, and

-- ensuring both internal and external communications between members and other relevant agencies.

AVA provides a leadership role in vocational education, as a cohesive force in policy direction at the national level and as a source of professional guidance for its national membership. AVA is effective in building a case for Federal policy or support either before Congress or the Administration and serves its constituents by suggesting areas for new program development and by providing an information conduit in publications such as the AVA Journal or the Vocational Education Reporter. While AVA sees the importance of reliable and timely occupational information for the vocational education field, it sees its own role as limited, due to lack of resources, and need for occupational data is not expressed without reservations. It was suggested, for example, that "traditional supply/demand data have not encouraged us to be very creative in vocational education about what might be that doesn't show up in [the data]." For example, if the South had built its vocational program 20 years ago on what the demand was, few programs or facilities would have resulted, since little demonstrable demand existed then. The first generation of those trained in the early years were placed all over the U.S. But, as industry moved south, it more than justified the advance planning. Consequently, "That kind of information can do a great deal of damage if it's based on yesterday's demand and today's supply."

Notwithstanding such reservations, AVA saw three major classes of occupational information needed for the organization and its constituencies to function effectively:

-- 'routine' supply and demand information by program and by occupation, as is now currently available,

-- projected supply and demand data to provide intelligence on socio-economic and labor market trends for forward planning, and

-- special studies that address in detail particular aspects of the labor market.

All three kinds of information are needed for building a case for legislative authorization, reauthorization, or appropriation, for directing policy, and for guiding the professional community which AVA serves.

In the area of ongoing, routine kinds of occupational information, AVA serves as a conduit for occupational information to the vocational education community and to Congress, particularly with respect to hard-to-fill occupations and occupations in high demand. Currently, however, AVA is limited in terms of resources and data to fill this role, either (a) as a conduit for members, or (b) for its own policy planning purposes. In particular, information is lacking nationally on jobs that are difficult to fill. The information needs to be geographically specific to the local level, and disseminated in time to permit appropriate state and local action. There was some evidence in August, 1979, when the national unemployment rate reached 6 percent, that certain jobs were still hard to fill, such as metal trades occupations, machinists, tool and die makers, but little hard data on these needs were forthcoming. "If we had a way of identifying the hard-to-fill jobs then zero [the information] down to states and areas of states, we [would] have a capacity in vocational education to move into those areas and mount programs...and disassemble programs when we've met the demand."

Another function for which AVA had a need for demand data is in developing curriculum standards. The Association is currently working with specific industries, (e.g., food service and graphic arts) to prepare standards for training programs, and has found the need to identify demand data for these specific industries. Demand data by industry are needed down to the level of major urban/rural areas within states. Of particular interest to AVA is the proliferation of small businesses, owned and operated by the self-employed, for which very few data exist. A small informal survey done by AVA in the Washington, D.C. area, for example, indicated a number of small privately owned print, graphic arts, and copy businesses which conceivably have considerable demand for skilled and semi-skilled labor, but are unlikely to be reflected in current demand data for the area.

AVA also needs supply/demand data, but suggests that caution should be used in actual matching, to account for generalizability of training (one course may prepare for a number of related occupations). For example, vocational education may be preparing considerably more than the number in demand nationally for auto mechanics (a program usually high in student interest ratings), however, many employers may seek that training as a prerequisite for a job in another area, (e.g., Xerox equipment repair). "The supply/demand model for vocational education implies a very simplistic match-up between training and jobs, and it (the match-up) is not there. It is giving us problems: the simplistic application of the supply/demand model will lead us to close out some programs very prematurely."

Two kinds of forecasting information were cited as needed for policy formulation at the national level. Changing technologies in materials and processes as a function of conservation goals, resource constraints, and the modernization of industrial plants are having an unknown impact not only on individual occupations, but on the "nature of work." Implications for possibly substantial retooling in vocational education curricula, and instructor qualifications and media are currently inadequately defined. In addition, information on potential demand for skills in a given occupational/geographical area may provide an incentive for vocational education program development. If, on the basis of reliable information, vocational educators are aggressive in seeking out potential demand, appropriate training or retraining strategies may stimulate both actual and projected demand in ways which might not be suggested if planning were only based on existing demand. Thus retraining of air conditioning and heating appliance workers in solar energy techniques may stimulate demand for those skills in the area of potential solar industrial expansion.

Finally, special studies on areas/occupations of particular policy or other interest to AVA are seen as a productive source of occupational information. Most useful to AVA have been a number of small, tightly focused studies on employment demand, for example, a National Association of Metal Tool and Trade Workers study of tool manufacturers, for the most part small companies, 70 percent of whom reported a shortage of skilled workers, and correspondingly lowered productivity. Toolmaking, a fundamental occupation to defense and energy industries, represents a case in which shortages in skilled labor drives employers to seek imported labor in the face of domestic unemployment. Information on these and other such skill shortages is useful to AVA in seeking new legislation or increased appropriations for relevant vocational programs.

In addition, the relationships between education, job search and job placement in both primary and secondary job markets are not well defined. There is little good empirical information on this process.

Because many vocational education graduates may go to work for small firms (or become self-employed), for which currently available demand data may be less representative, there is a need for further research into the job histories of graduates to determine actual career progressions in relation to skills received during training. For example, AVA has worked with the food service industry in determining the employment ladder within the industry (about which both parties know little and need to know more) and how to communicate this information to vocational education students.

3. The National Advisory Council on Vocational Education

NACVE, and State Advisory Councils on Vocational Education (SACVEs) were created by the Vocational Education Amendments of 1968 (P.L. 90-576) with different mandates and categories of membership. NACVE advises the President, Congress, the Secretary of Education, the Assistant Secretary for Vocational and Adult Education, and others on policy for and administration of programs of vocational education. Another central function of NACVE is in the area of advising agencies responsible for the CETA programs or policy development. In this role, NACVE is charged with identifying, in consultation with the National Commission on Employment Policy (NCEP), the vocational education and employment and training needs of the Nation, and assessing how well existing programs are meeting these needs. A linkage with CETA programs is explicit through the CETA legislation whereby a member of NACVE is required to sit on the NCEP and *vice versa*, for the purpose of joint consultation in analyzing employment (supply/demand) data as they relate to both vocational education and CETA activities. Although the legislative charge is specific, it is extremely difficult to implement. That is, NACVE, while responding to its other mandates, does not have the in-house resources to enable it to gear up for anything other than a macroassessment or overview, and to assure that the data are reasonable and in harmony with programs in vocational education. NACVE resources, of necessity, tend to limit the amount of primary data that can realistically be gathered. Nevertheless, NACVE perceives that synthesized occupational information is essential for the administration of the vocational educational system. It is a well known fact that vocational education, as it is currently administered, has suffered from a lack of accurate, verifiable, reliable, and consistent data. Oversight hearings have emphasized some doubt, particularly regarding enrollment (supply) data, as to the accuracy of those statistics. Demand data are needed on new and emerging occupations, or occupations in which there are critical shortages of trained people. Congress places considerable emphasis on new and emerging occupations and the need for new and more productive/competitive technologies. NACVE, however, has difficulty in assisting the BOAE in meeting Congressional interests because of little information on either the demand for that kind of labor, or specific skills needed.

The bulk of the initiative for program planning is at the local level, yet little incentive exists for local education agencies to tool up for training for new and emerging occupations at the local level, because of focus on short-term and immediate gains rather than long-term needs. If reliable data were to indicate substantial current or forseeable shortages, then NACVE could be more specific in advising on the use of funds for equipment and program development in new and emerging occupational fields. In this area, however, the Congressional stance tends to be contradictory; on the one hand they are asking program administrators to focus on new and emerging occupations, for which demand may be substantial in the immediate future, but is not now, while on the other hand, responsive vocational education or employment and training program planners may run the risk of failing by the Congressionally established criterion which requires employment of graduates in fields for which they are trained. Furthermore, program start up costs are substantial, particularly considering the risk of lack of immediate placement of completers in that field.

But, it is in the area of supply information that the NACVE need was perceived as most critical, and particularly the resolution of disagreements over operationally consistent guidelines for data collection and interpretation of supply data in vocational education. This deficiency is seen not only as limiting the effectiveness of vocational education in making a case before Congress, but also as inhibiting NACVE in advising on the formulation of policy in vocational education, and in providing recommendations to the NCEP and others. Furthermore, it is not currently clear to NACVE what percent of supply in an occupation is provided by the public school system vs. other sources of supply. This "other" supply may be recognized by the local public vocational system, which thus appears to be relatively slow in responding, even to an adequately identified need.

NACVE's perspective is, by definition, wider than just vocational education, and covers, through its linkage with the NCEP, the entire employment and training policy arena across a wide number of Federal agencies. It is NACVE's position that no consistent body of knowledge with a corresponding data base currently exists, to which each agency has access in either presenting arguments before Congress, or in conjunctive planning. Such a standandized data base at the national level would provide a basis for coordinated interagency policy development. Thus, when critical shortages of trained personnel are identified in several public and private employment sectors, (e.g., as when there is recruitment of master shipbuilders from Portugal, or skilled labor from overseas by big electronic corporations, or the identification of shortage of skilled labor in the Armed Forces), there would be a body of accurate and consistent data upon which decisions can be made to deal with each of these problems. Furthermore, when small businesses are targeted in specific local areas as qualifying for SBA Federal assistance, such decisions should be supported by comparable data to those (relevant supply/demand data) used for associated employment and training program decisions.

Finally, NACVE indicated a need for complementary information in the form of labor market demographics and trends. By way of illustration, the increasing average age of the workforce suggests a serious need to identify what occupations are most affected by this fundamental change, and to monitor these occupations to detect shortages when they occur. There is, for example, evidence that the average age in skilled trades (tool and die-making, and machinists) is 55 to 56 years. As these workers move out of the workforce within the next 10 years, shortages may be expected with implications for vocational education and employment and training programs in those occupations.

C. Employment and Training Administration

1. Veterans Employment Service (VES)

a. Introduction

VES is administered by a Deputy Assistant Secretary of Labor for Veterans Employment, and operates under Chapter 14 of Title 38 of the U.S. code. VES is charged with ensuring that veterans are provided with employment and training opportunities commensurate with their needs. The Deputy Assistant Secretary is appointed by the President, and is the principal advisor to the Secretary of Labor on all DOL programs and policies as they affect veterans.

The mission of the agency includes functional responsibility for (a) supervision of the registration of eligible veterans in local Employment Service offices for job counseling and job placement services, (b) engaging in job development and job advancement activities for veterans, (c) assistance in securing and maintaining current information on available employment and training opportunities, (d) outreach to employers and labor unions in the search for employment for veterans, and (e) promoting participation in CETA programs by veterans.

The major role of VES is to oversee the state and local functions in ETA, particularly in ES and CETA operations of the state and local level, to ensure that the mandates and regulations regarding services for veterans are being followed (e.g., drawing a sample from the active veteran file to ensure compliance). A somewhat more limited role is defined for VES in the Unemployment Insurance part of the ES, through the Unemployment Compensation for ex-servicemen (UCX) program. Under CETA, only two groups are specifically mandated for special consideration: (a) disabled veterans, and (b) Vietnam era veterans under age 35. When

CETA was reauthorized in 1978, these two target groups of veterans were retained. Functions for VES relating to CETA include:

- sign-off on CETA regulations and guidelines;
- offering assistance to field staff in review of state plans; and
- outreach and public information.

VES operations vary quite widely from state to state depending on such factors as number of prime sponsors, size of state office staff, etc.

b. Occupational Demand

Although because of a lack of staff resources, little occupational information is currently being used in the Veterans Employment Service (VES) at either the national or state levels, a general need was expressed for occupational information particularly in light of increased Federal emphasis on targeting in human service programs. "We need to see...where are the veterans, and where are the jobs, and are there training programs already in place that we can link into?" In particular, VES needs occupational information to assist in its review of job development activities of state and local ES offices. For example, "...are they calling the kinds of employers that are likely to have occupations to which veterans can be referred?" Current and projected occupational demand information is needed to determine the occupations in which job openings are, and are likely to be available for veterans. Furthermore, projected demand data are seen as valuable for preparation of annual budget statements and associated priority setting at the national level. Current data on demand are needed at the substate labor market area level, at the 9 digit DOT level of specificity, and are needed annually, except for the purposes of CETA planning, when data are needed more often (quarterly). The required projection period for projected demand data is estimated to be three to four years.

c. Occupational Supply

Supply data are seen as needed for VES to be able to adequately comment on either the state ES plan or the CETA prime sponsor plans. While VES is not required to have the data available, for example to hand to prime sponsors, nevertheless "we should be able to give them the [necessary] technical assistance to say 'you can get it from this [or that] source, and if you can't get it let me know and I'll assist you'." The VES is a primary source of data on veterans, often serving as a conduit between a state agency and the VA. For example, the Disabled Veterans Outreach Program (DVOP) needs information from the VA on numbers of disabled veterans in an area. An agreement was reached* with the VA to provide computerized lists of veterans by area to the state employment service agency through which DVOP is administered. This information, however, provides no information on occupations, and "it would be very nice for DVOP to have a source of occupational supply data for disabled veterans...by interest, by previous work experience and educational background, i.e., What are you qualified for now and what would you be interested in?" These data, then, could be matched to either jobs currently available, or training or rehabilitation programs geared appropriately toward specific client interests.

The VES Office of National Programs has funds for specific program activities, for example, in the targeted technical assistance program, which provides dollars directly to prime sponsors for programs for disabled veterans, including job placement programs and a variety of supportive services for those veterans who are not job-ready. For this kind of program, "it would be very handy to have this occupational... supply information."

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*Negotiated by VES.

Supply data are needed for VES at the labor market area level, at the DOT 9 digit level of specificity, and annually, except for data for CETA planning, which is needed more often (quarterly). The required projection period for projected supply data is estimated to be 3 to 4 years.

d. Occupational Characteristics

The employment history of veterans in occupations is perceived by VES to be useful in developing a profile of veterans' occupational progress, and assisting in better guidance toward gainful and lasting employment for veterans. The major uses of occupational characteristics data in VES are for: (a) determining the location of outreach efforts, (b) projecting future program directions (e.g., is a new HIRE program needed, and if so, should it be targeted to a specific geographic area?), and (c) linking training projects to relocation programs.* Most needed data elements in the job characteristics category for VES included earnings and benefits, job duties, abilities and aptitudes, education/ training requirements and skill acquisition patterns, major employers, hiring channels, and job titles and descriptions.

e. Complementary Information

Complementary information needed by the VES included inventories and descriptions of available education and training programs conducted by prime sponsors that could be used in VES review of prime sponsor plans.

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*A job relocation program involves finding a job for which a particular veteran seeking work is qualified, and provision of fiscal assistance for travel to an interview, and if necessary, further financial assistance for moving and setting up a new home.

f. Supply/Demand Information

The only application of supply/demand analysis to VES functions was in the provision of specific information on the supply of veterans in a given occupation/labor market area in relation to the demand for veterans in that occupation/labor market area. The need for these data was perceived to be low, given present resources, but potentially useful in planning for future programs with associated legislative and budgetary justifications. These data would be needed at 9 digit DOT specificity, and would, for current supply/demand purposes be most useful annually, except for purposes of CETA planning, which would need to be more often, ideally every quarter.

2. Division of Equal Employment Opportunity, Office of Investigation and Compliance (OIC)

a. Introduction

The Office of Investigation and Compliance (OIC) is responsible for seeing that ETA grantees are in compliance with the various Federal civil rights laws. Specifically, OIC is responsible for seeing that grantees are in compliance with Title VI of the Civil Rights Act. In addition, they are responsible for assuring that there is no discrimination by the managers of CETA programs with respect to CETA staff.

Most of the work by the small staff of the OIC is to review complaints that allege noncompliance with these laws. These complaints contain allegations of discrimination with respect to such activities as referral to training, wages paid, promotions, etc. The OIC staff reviews the information provided regarding the complaint, and then issues a ruling concerning whether or not the complaint is justified. Due to staff limitations, the office functions primarily in a reactive mode, rather than by systematically reviewing information to determine whether discrimination exists.

In order to fulfill its responsibilities, OIC has a frequent need for various types of occupational information, mostly in the occupational characteristics category. In particular, the need was expressed for some independent source of occupational information, due primarily to the fact that often each party in a complaint will present information that justifies their own position, and the OIC has no way of independently verifying either the validity or the reliability of the information.

b. Occupational Characteristics

The Office of Investigation and Compliance has a frequent need for occupational characteristics information in its role of monitoring ETA grantees for compliance with Federal civil rights legislation. A high need exists for almost all the elements in the occupational characteristics category with particular emphasis on information on job duties and work settings/conditions, especially as they affected women and handicapped people. Information on abilities and aptitudes is needed to determine if there has been any discrimination in testing for basic skill levels as a prerequisite for enrolling people in specific training courses. Information on demographics of workers is frequently used in compliance reviews with respect to alleged discrimination of individuals in CETA program management positions. In view of the increasing number of complaints coming before OIC, the need is growing for independent data sources for verification of complaints. However, since training-related placements in fiscal 1981. Prime sponsors are being instructed to report numbers of enrollees, completers, and placements from institutional and OJT training programs at the 9-digit level of DOT detail, if such information can be provided. If it is not possible to report information at this level of detail, the prime sponsor is instructed to provide the maximum feasible amount of detail in the DOT classification scheme. At the present time, this information will only be used at the national level for developing the necessary tabulations to provide a report to Congress. There do not appear to be any current plans for either analyzing the types of training provided or for using the information to carry out some limited matches of occupational supply and demand.

4. Office of Policy Evaluation and Research, Division of Planning and Policy Analysis (OPER/DPPA)

OPER has as its major charge to formulate and recommend ETA policies, plans, and resource allocations as well as to coordinate and review ETA functions related to legislation. The Division of Planning and Policy Analysis within OPER has a continued need for occupational information in preparing policy options for ETA and departmental management, as well as for long- or short-term strategic planning and identification of budget options. Specifically, the Division's four major functions are:

- high priority, one-time requests for specific information either from within or outside ETA to meet a particular concern, (e.g., White House requests for area minority unemployment statistics for Presidential briefings);
- annual budget preparation and justification;
- preparation of the Employment and Training Report of the President and ancillary reports (e.g., evaluation reports mandated under Section 313, PL 93-203); and

-- preparation of strategic planning papers on particular topics of concern to ETA (e.g., in search of systematic approaches to countering cyclical unemployment, to shape CETA training programs toward the employment needs of industries involved in substantial reinvestment and retooling, or to anticipate significant occupational shifts expected to result from modification of industrial energy sources).

The need for these data is sporadic, issue-specific, and difficult to characterize in terms of occupational or geographic detail. In the words of one respondent, "sometimes your needs become apparent only after you get involved in a particular issue..." Accordingly, data access strategies tend to match the need by being relatively unsystematic and ad hoc. Usually, obtaining data in response to these kinds of short-term needs requires knowing the right person with ready access to the information for that particular issue. The suggestion was made by the respondent from DPPA that a coordinated Federal information base is essential: "there is no uniform system...in place in ETA now that taps into studies that have been done elsewhere, within DOE, for example, or BLS...there is no coherent system for marshalling all this information together" on employment and training issues.

5. Office of Policy Evaluation and Research, Division of Legislation and Program Development (OPER/DLPD)

DLPD is concerned with legislative coordination within ETA, a function that is shared with other offices (e.g., the DOL policy office at the secretarial level and Office of Research, Legislation and Program Policies (ORLPP) within the Unemployment Insurance Service). Activities include preparing testimony and providing technical assistance to witnesses in congressional hearings, working with congressional committee staff in the drafting of legislation, interpreting legislation and reviewing ETA regulations, preparing policy papers relating to legislative issues and monitoring policy analysis contracts with state and local officials funded by Title III funds through The National Governor's Association (NGA). While any one of these functions may require occupational information, the need varies in both degree and frequency and again is difficult to characterize in specific terms. The function most likely to require detailed occupational information is working on legislation prior to enactment. In the CETA reauthorization in 1978 for example, DLPD had a "vast need" for occupational information, with the major need for employment and unemployment data for low income groups. Because CETA refers to areas of substantial unemployment, data needs are usually by state, SMSA, city, and by prime sponsor area. The frequency of need was described as "occasional but not very often," and the process was described as "going to the LMI [Labor Market Information] people on an as-needed basis...half the time [the data are] being compiled, the other half [they aren't]. Sometimes there's a way in which we could get it easily if it isn't available on the basis we want it, oftentimes not." In particular, it was indicated that deadlines for legislative development are so pressing and staff availability for data search and analysis are so limited, that the need for data must always be tempered by considerations as to eventual use and practicality of format so as to avoid frustration and wasted resources. "There are so much data available, but it's in such crude form that nobody has time to analyze it." Efforts are needed, therefore, to synthesize and coordinate data flow to enhance its availability "in a form that is readily usable."

6. Office of Policy Evaluation and Research, Division of Labor Market Information (OPER/DLMI)

a. Introduction

Congress has mandated the creation of a flexible, comprehensive LMI program that meets the needs of a large number of user groups. Nearly 20 Federal laws and executive orders have established specific, yet wide-ranging, requirements for the current LMI program which is administered through ETA, BLS and State Employment Service Agencies (SESAs). The purposes of the LMI program are manifold, but include knowledge development for a wide variety of constituencies in both public and private sectors, technical assistance to SESA research and analysis (R & A) units and other organizations/individuals using labor market information for planning and policy development purposes, and supporting resource allocation decisions, particularly the allocation of CETA monies to prime sponsor. There is a clear need for extensive occupational information in this agency, which is one of the central units in the generation and use of labor market information in the Federal government. As with many of the agencies surveyed in this study, however, the need is not strictly characterized as a Federal need, other than for the purposes of monitoring information flow. DLMI does not often use the data, but rather provides technical assistance to and monitors SESA output for use primarily by state and local level CETA planners.

b. Occupational Demand

Within the above context of this explicit definition of "need", the DLMI has a high need for information on current and projected occupational demand, and on employment by industry. These data are needed annually at the labor market area level of geographical detail. The occupational detail for current occupational demand should be "equivalent or comparable to the SOC coding scheme."

c. Occupational Supply

DLMI has a high need for information on the number of qualified, currently unemployed individuals to support the general Federal knowledge development function. Again, the data are not used at the Federal level, but rather by the states for planning employment and training programs. Through a cooperative arrangement with the Lawrence Berkeley Laboratories, the DLMI has supported the development of a computerized model for providing information on population, labor force, total employment, and unemployment at the county level. This information is provided on an annual basis for a projection period of one year. DLMI also has a high need for information on ways to estimate the net migration, occupational transfers, and new entrants components of occupational supply. This information is needed to further develop knowledge concerning the flows of these supply components in local labor markets and as a basis for developing technical assistance guides that can be used by employment and training program planners. The Division is currently sponsoring the development of improved knowledge on these flows through its monograph program. The State of New York is, for example, currently developing a monograph on labor force demand data by developing estimates of job openings resulting from occupational and geographic transfers, outmobility and educational attainment requirements.

d. Complementary Information

The most needed category of occupational information within DLMI was complementary information, and in particular, information on labor force demographics and trends. The information requirements are labor force participation and unemployment rates by age, sex and race at the county level. This information is provided to the Division on an annual basis by states for input to a computer model to project population, labor force, employment, and unemployment by age, sex, and race by county for one year into the future. These data are included in the projection program maintained by the Lawrence Berkeley Laboratories referred to above, which is currently operational for all 3,000 counties in the country.

The major need is for estimates of the number of unemployed and the rate of unemployment. Again, use of these data is largely outside the national office: "...most of this occupational information would be useful at the local level, but in running a national program up here we would not be using anything more than total unemployment estimates." These estimates of unemployment rates and the number of unemployed are used both to support policy development and resource allocation functions within ETA. They are needed annually for each of the approximately 2,000 labor market areas in the U.S., and are used to allocate funds for CETA and other DOL activities mandated in legislation and to determine which areas can be classified as labor surplus areas for preference in Federal procurement under Defense Manpower Policy No. 4B.

Data on unemployment and unemployment rates have been incorporated into an on-line computer assisted labor market analysis system (CALMAS), maintained by ETA. Information in CALMAS is used to simulate the allocation of CETA funds under different proposed allocation formulas and to analyze the allocation of funds for economic development projects by staff of the Economic Development Administration. There are several instances in which this type of information was used for policy development purposes in other ETA units during the CETA reauthorization process in 1978.

A high need also exists for information on characteristics of disadvantaged populations. This information is needed on a LMA geographic basis and is used for policy development and resource allocation purposes, more specifically to determine if CETA and other employment and training programs are reaching those most in need. At the present time, this detailed information is provided through sources such as the decennial population census, the Current Population Survey, and the 1976 Survey of Income and Education (SIE). DLMI staff cited a need for this type of information on a more timely basis, and indicated that "it would be nice to have it available on a monthly basis in order to maintain close monitoring of the effectiveness of ongoing programs."

A high need also exists for information on commuting patterns. This information is needed on a county basis for general policy and knowledge development purposes. More specifically, the information for the DLMI to carry out its responsibilities of reviewing the definitions of the approximately 2,000 LMA's throughout the country and making any necessary adjustments in the boundaries of these LMA's as reflected through changes in commuting patterns.

7. Bureau of Apprenticeship and Training (BAT)

a. Introduction

The Bureau of Apprenticeship and Training within the Employment and Training Administration operates under a national mandate, the Fitzgerald Act (50 stat. 664; 29 USC 50; July 1, 1937), which directs the Secretary of Labor to "formulate and promote the furtherance of labor standards necessary to safeguard the welfare of apprentices, to extend the application of such standards by encouraging the inclusion thereof in contracts of apprenticeship, to cooperate with state agencies ...etc."

The resultant national apprenticeship and training system operates currently though ten Federal regions, all 50 states, the Virgin Islands and Puerto Rico. A total of 160 state and local offices work through a series of cooperative informal agreements in the national network. The basic intent of the system is "to promote, develop and maintain quality apprenticeship and training programs that meet or exceed recognized standards as published by the Secretary of Labor and to assure an adequate supply of skilled labor as required by the technically-based economy of the United States."

Currently there are approximately 300,000 registered apprentices in the U.S., about 80 percent of them in construction and manufacturing occupations. BAT has as one of its major long-term objectives the extension of registered apprenticeship programs in the U.S., particularly into occupational sectors where it is not commonly used. To this end, BAT provides training and operational guidance to the states in the development and promotion of apprenticeship programs at the state and local levels.

b. Occupational Demand

The BAT has two major agency functions requiring occupational data for their accomplishment. The first stems from BAT's objective of increasing the penetration of apprenticeship programs into new occupations and improving the distribution of apprentices across industrial sectors. Second, similar data are needed to inform decisions concerning where, optimally, to target staff resources in state and local offices by geographic region, such as the addition of a new local office in a state, or an increase in number of staff, in areas of greatest industrial concentration or where BAT senses the needs for its services are the greatest.

In determining new priority areas for targeting industries/occupations for promotion of registered apprenticeship programs, broad identification of specific industries/occupations is made at the national and regional level, in accordance with BAT goals and operational procedures and on the basis of national data on need for skilled labor. Then contacts are made at the local level by individual state or local BAT representatives with the purpose of introducing approved apprenticeship programs into a specific business or industry. It is this process of program promotion for which occupational information is needed. Currently "all our eggs are in one basket, construction and manufacturing," since as indicated above, the majority of apprentices are in those two industries. Data are needed on current and projected demand and supply in apprenticeable occupations to determine where "to (concentrate) promotional campaigns on occupations and industries which have a growing need for highly trained skilled workers but few apprenticeship programs to train such workers."

"Data are needed which identify industries, occupations and localities which have significant unmet demands for skilled workers. For maximum usefulness, such data should be sufficiently detailed to be able to focus on those occupations in which the apprenticeship system is particularly well-suited to provide training (i.e., occupations which provide a year or more of OJT training and 144 or more hours of related instruction.)" In particular, current employment, job vacancies, expansion or reduction in employment demand, replacement demand, and employment by industry data are all reported as "high" need data for all apprenticeable occupations. The data are needed for national planning purposes to identify both current and future needs for apprentices by occupations. Geographical specificity in demand data is at both the national and LMA levels, frequency of data update is annual, and the projection time frame is one to five years. Adequate demand data are currently perceived to be available for BAT from existing Federal/state reporting programs (e.g., the OES program).

c. Occupational Supply

Supply data are needed on educational enrollment, completers and leavers, qualified currently employed and seeking work, net migration and occupational transfers. In particular, the State/National Apprenticeship System (SNAPS) data currently available do not give an adequate picture of current or projected supply of skilled workers by occupation, industry, or location. Furthermore, SNAPS only covers those apprenticeship programs that are currently registered, thus missing all journeymen and apprentices and other trainees in nonregistered programs. In light of the expressed need for reliable data on numbers of apprentices in unregistered programs by occupation and industry, BAT staff have made contacts with BLS to use OES apprenticeship data in coordination with SNAPS data for BAT planning. These data are needed by state, SMSA and labor market area, and for all apprenticeable occupations.

d. Occupational Characteristics

Occupational characteristics data are needed by BAT at the national level in a variety of areas for determining the apprenticeability of occupations and to assist in the development of national standards for apprenticeship in specific occupations. Specifically, the need is present for the following data element; (a) job duties data are important for determining the apprenticeability of occupations, (b) licensure and registration data, education/training skill acquisition patterns and training requirements, information on career ladders and occupational titles and descriptions, for developing or approving national standards for apprenticeship, and (c) data on demographics of workers by occupation, for fulfilling BAT's equal employment opportunity responsibilities by occupation and by industry. The data are needed by state, SMSA and labor market area, for all apprenticeable occupations.

e. Complementary Information

BAT needs inventories and descriptions of education and training programs to develop and promote apprenticeships. Data on financial assistance programs are useful as a source of information on potential applicants. In particular, BAT could use data on total (registered and unregistered) apprentices in matching demand for skilled labor with total future supply.

f. Supply/Demand Information

BAT expressed a need for occupational classification structures for both supply and demand, as information for methods by which supply and demand for apprentices can be matched meaningfully.

The need for more detailed occupational classification for apprenticeable occupations is emphasized by the fact that many such occupations are included in the general category of craftsmen, foremen, and kindred workers. The tendency to focus on this broad category results in planners missing some apprenticeable jobs, for example, in the professional category, such as programmers or health service workers, medical records technicians, radiologists. Although this is not "a highly significant problem" since the penetration of apprenticeship programs into the more traditionally apprenticeable occupational areas is still inadequate, BAT is concerned that the potential in these emerging occupations not be overlooked.

8. Unemployment Insurance Service, Division of Actuarial Services (UIS/DAS)

a. Introduction

The UIS* provides guidance to SESA's for development and operations of the Federal/state unemployment insurance program and the related wage-loss income maintenance programs. The organizational functions of UI include:

- oversight of the administration of unemployment benefits to claimants at the state and local level, including review of state laws and compliance of state and local procedures with Federal guidelines;
- technical assistance (e.g., assisting states in data processing, tax collection or auditing functions);
- Federal auditing of postal service benefits process, ex-servicemen and other Federal employees benefits;

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*Usually referred to as UI.

-- legislative development related to unemployment insurance; and

-- provision of public information and outreach.

The need for occupational information UI is relatively limited, and is mostly specific to information of claimants and related occupations.

b. Occupational Supply

The UI has a limited need for occupational supply information to support responses to Congressional inquiries for either annual budget statements or for additional, specific requests. UI needs claimant-specific information rather than on the workforce as a whole, and in particular needs information on characteristics of the insured unemployed. The only routine data used in UI currently at the national level is from the ES 203 Federal/state cooperative program, which provides information on DOT occupation by industry of last employment, race, sex, age and duration of current period of unemployment of the currently unemployed. An interest was expressed for more extensive information on previous work history of UI claimants, and also on what happens to them after benefits are exhausted. Special studies were conducted during the 1975 recession to determine the subsequent work experience of claimants who had exhausted their benefits, to determine whether they were representative of the workforce as a whole, and whether certain occupations appeared more likely to be affected by unemployment, (e.g., occupations such as the construction industry which display routine seasonal shifts). The skill levels of those individuals who are currently unemployed and seeking work are also of interest to UI staff. These are some of the typical information needs of UI in working with Congressional committees to improve the system of UI benefits.

Other concerns expressed by Congress to UI, which need occupational information to address, include the extension of the eligibility period for unemployment benefits, and the exploitation of the system by ineligibles. The need for the information varies considerably and is, of course, greater during periods of high unemployment. The level of needed geographical detail is at the national and state levels (not below the state level of detail since the program is targeted at the state level). Information for broad categories of occupations are sufficient, and specific occupations are not necessary.

c. Occupational Characteristics

UI is interested in information on "high risk" occupations most subject to fluctuations and, hence, unemployment. Ancillary wage information for these occupations would also assist in the determination of expected costs of coverage in these occupations.

9. U.S. Employment Service, Office of Technical Support (USES/OTS)

a. Introduction

The United States Employment Service (USES), under the provisions of the Wagner-Peyser Act of 1933, provides assistance to states in establishing and maintaining a system of local public employment offices in the states and territories. The Federal/state employment service is responsible for providing job placement and other employment services to unemployed individuals and other job seekers, providing employers and workers with job development, placement, recruitment and similar assistance including employment, counseling, and special services to veterans, migrant and seasonal farmworkers, youth, women, older workers, and handicapped persons, and related supportive services.

Within USES, the OTS has a three-fold purpose: (a) to develop, test and provide methods and techniques for testing, job search and job and occupational analysis; (b) to develop and disseminate job information systems related to employment service operations; and (c) to implement the labor certification provisions of the Immigration and Nationalization Act.

The Division of Occupational Analysis (DOA) in OTS is responsible for the development of occupational information and particularly occupational classification at the national level. Thus, not only does DOA produce information, but also "at any level you can think of, we use occupational information." The Division has multiple uses for occupational information in carrying out its functions and for making its products available, including the development of handbooks on job evaluation, development and dissemination of the Dictionary of Occupational Titles, the Guide for Occupational Exploration, individual career guides or brochures for clusters of occupations in particular fields, (e.g., health occupations) and a monthly bulletin, Occupations in Demand at Job Service Offices (OID), which highlights occupations with job openings available throughout the U.S. Ten occupational analysis field centers also operate throughout eight of the Federal regions, and are administrated out of the respective ETA regional offices with technical support and monitoring by DOA.

Primary sources of data for the field centers include state and local employment service operations, and individual firms, professional groups, and unions. For example, when a local ES office encounters a job for which no current occupational description is available, the office will contact the nearest field center to request a job definition. The determination is then made at the Field Center as to whether the job can be placed within an existing definition, or whether a new title and description are needed. DOA may also work directly with a private agency, for example, the American Petroleum Institute, with whom DOA is currently preparing a series of publications on new and emerging occupations in the petroleum industry. In addition to these specific DOA/industry linkages, each field center has a number of industries for which they are responsible and which have as their purpose conducting periodic job analyses with the permission of appropriate industry management personnel.

b. Occupational Demand

The OID publication represents a major use of occupational demand data collected monthly through local job banks. Employer requests for specifically qualified applicants are compiled by each state, and presented in the aggregate by national totals, and by individual industrial group by area having a significant number of openings. Special editions of this publication may be developed for a specific local area (e.g., South Bronx), or for specific use and target groups (e.g., students and recent graduates). The OID is published monthly and contains data by at the 9 digit DOT code of occupational specificity, and at the state and (occasionally) substate level of geographic detail. Its purpose, and hence the justification of need, is to provide indications of occupations in greatest demand in the National Job Bank network throughout the United States. A further use for current occupational demand data is in providing information to the Immigration and

Nationalization Service related to the admission of aliens into the U.S., dependent upon tests of availability and adverse effect upon U.S. workers. Data on projected occupational demand are not currently a priority, although OTS recognizes an increasing need for these data. Employment by industry data are needed in the monthly preparation of OID.

c. Occupational Supply

An infrequent need was expressed for the general category of occupational supply data in OTS, although specific subcategories were not emphasized. The data are currently used to support decisions to focus a publication (e.g., career guides) on particular occupations at the national and state level.

d. Occupational Characteristics

High need exists for occupational characteristics information for monthly publication in the OID for high demand occupations, and for specific career guides by occupations. Earnings and benefits data are needed explicitly for the OID. Occupational titles, education and training requirements, job duties, work settings and conditions, and abilities and aptitudes data are needed periodically in DOT updates, and for publication in career guides.

e. Complementary Information

OTS has a need for inventories and descriptions of education and training or financial assistance programs for inclusion in career guide publications. For example, the planned Environmental Protection Careers Guidebook will contain a national compendium of universities with graduate level programs relevant to these occupations.

10. Office of Comprehensive Employment Development, Office of Community Employment Programs (OCED/OCEP)

a. Introduction

The Office of Community Employment Programs has four primary functions: (1) interpreting the CETA legislation, (2) developing regulations for implementation and operation of CETA programs, (3) reviewing CETA program performance, and (4) providing technical assistance and guidance in CETA planning. In carrying out these responsibilities, the OCEP staff work closely with various groups, such as a work group selected from CETA prime sponsor directors and public interest groups. A similar procedure is followed with respect to development of CETA regulations.

b. Occupational Demand

The need for occupational information in carrying out these functions is largely at the prime sponsor level, rather than at the national level. Such demand data as are needed at the Federal level are used to determine if CETA programs in the aggregate are being responsive to changes in training needs in the nation. Extensive occupational detail is not seen as needed either at the national or even at the local level, since the CETA system is only training people for a limited number of occupations. A need exists for innovative mechanisms to improve private sector input into the training process: "Information for developing training curricula for these specific occupations can probably best be obtained from employers in the community who will be hiring these workers." Detailed information from surveys or occupational information systems is seen as useful to prime sponsor planners in order to indicate the general types of skills in demand in their communities and to provide them with a starting point in developing their employer contacts and subsequent training curriculums.

c. Occupational Supply

Since CETA is only able to serve a small percentage of those who are eligible for the training, OCEP perceives little need for detailed information on sources of occupational supply. Funds available to the CETA system limit any substantial impact on overall occupational supply. Local CETA prime sponsors, however, are encouraged to work closely with local vocational education officials in order to insure that significant duplication is avoided.

Information on occupational transfers is seen as useful at the national level for certain selected broad occupational groups (e.g., steel workers, auto workers, and rubber workers). This is particularly important at the present time in view of the limited employment outlook for those seeking work in these industries. OCEP staff indicated that, "information on the transferability of skills possessed by these workers would be useful in developing some national programs for retraining and relocation assistance."

d. Occupational Characteristics

Information on occupational characteristics is seen as of only limited usefulness at the national level. However, data on earnings and benefits, work settings/conditions, abilities and aptitudes, education/training skill acquisition patterns, career ladders, and hiring channels are useful for local CETA prime sponsor staff. It was stressed that "this information must always be interpreted in light of the fact that CETA is training people primarily for entry level types of jobs."

e. Complementary Information

Complementary information is also of only limited usefulness at the national level. However, it was suggested that this information should be developed at the local level, as national information or inventories on such items as a description of education and training programs and financial assistance programs would be of only limited usefulness in a local area. Information on labor force demographics and trends is definitely needed at the local level however, and the Census of Population is seen as probably the best source of this information.

f. Supply/Demand Information

Again, OCEP believes that this information was of only limited usefulness at the national level. Furthermore, OCEP staff think that detailed analyses are only of limited usefulness for CETA planners, as they are only serving a small portion of the total labor market need. In this light, it was suggested that "supply/demand analyses at present are relatively unsophisticated at the prime sponsor level and will probably remain so." The CETA system should be viewed as providing some general forms of occupational training that could be applicable in a number of specific occupations/job assignments across a variety of firms. Information on these types of occupational clusters and their associated skill requirements can best be obtained by CETA prime sponsor staff through interaction with local employers. When prime sponsors plan training directed to more specific occupations, the information on short-term demand needs to be derived directly from employers who are prepared to hire successful completers, since there must be solid expectation of placement at the time of completion of training, which in most cases in CETA is relatively short-term. However, "information on general types of occupational clusters and associated skill requirements may also be useful at the national level in order to generate selected technical assistance materials for local prime sponsors."

11. Office of Community Employment Programs, Division of Program Review (OCEP/DPR)

a. Introduction

The Division of Program Review is the national office responsible for the operation of CETA prime sponsors. This unit reviews applications from units of government and designates those who are eligible to be prime sponsors. In addition, the Division develops policies and procedures for reporting prime sponsor activities, and is also responsible for reviewing reports of prime sponsor activities as submitted by DOL regional offices and consolidating these into a national report of CETA activities. This information is then incorporated into the annual Employment and Training Report of the President.

With the passage of PL 95-524, (Comprehensive Employment and Training Act Amendments of 1978), the Division has become increasingly involved with occupational information, specifically, in developing new systems to meet expanded reporting requirements as specified in the amendment. According to Section 313(g)(1)(B),

> "The Secretary shall establish procedures for the uniform reporting by prime sponsors of information on enrollment, completions, job placement, and training-related placement by detailed occupational or training code for classroom and on-the-job training programs funded under this Act."

According to Section 313(g)(3),

> "For purposes of this subsection, the term 'detailed occupational or training code' shall mean any occupational or training code equivalent in detail to the Standard Occupational Classification at the 4-digit level."

At the present time, the Division is in the process of developing a two- to four-year plan for implementing this requirement. At the time of the interview for this project, no details of this plan were available. In general, however, the need for occupational information was seen as primarily at the local prime sponsor level, and not the national level. Consequently, the following presents DPR perceptions from the national level concerning prime sponsor needs for occupational data.

b. Occupational Demand

A need exists for information on both current and projected occupational demand for knowledge development and planning purposes at the local level. This information is needed on an annual basis and at a level of geographic detail consistent with the prime sponsor's service area. Respondents doubted the validity of long-range projections for prime sponsor planning purposes and felt that a three-year projection period would probably be the longest that could be used effectively. The required level of occupational detail depends upon types of jobs available in the labor market served by the prime sponsor, and the capabilities of prime sponsor staff to assimilate and work with occupational data. Finally, it was stated that information on replacement demand might be particularly useful for prime sponsors in planning Title II-C (skill upgrading) activities.

c. Occupational Supply

The DPR is required by the 1978 CETA Amendments to establish procedures for prime sponsor reporting of information on the numbers and characteristics of individuals participating in CETA programs. Current plans are for these procedures to be implemented over a period of years. It is anticipated that in fiscal 1981, prime sponsors will report on the number of participants and completions in vocationally-oriented classroom training and on-the-job training programs. Numbers of placements and the numbers placed in training-related occupations will not be reported until at least fiscal 1982.

Three major needs that are required to meet Section 313 reporting requirements: (a) a classification or coding scheme for CETA training activiites; (b) a classification or coding scheme for occupations in which CETA trainees are employed, (the majority of prime sponsors who are familiar with occupational classification schemes have used the DOT scheme, particularly in their working relationships with the Employment Service); and (c) a procedure for determining whether an individual is placed in a training-related occupation. It is recognized that a large proportion of CETA training activities are provided by educational institutions who also operate within the vocational education information framework, implying a need for developing reporting systems that are consistent with the proposed VEDS system in order to avoid unnecessary duplication and confusion in reporting.

d. Occupational Characteristics

DPR perceives little need for occupational characteristics information at the Federal level, but considerable need at the local level, particularly for data on earnings and benefits. This information, which is needed annually for a prime sponsor area, is used in knowledge development and planning activities, especially in planning and operation of public service employment programs, and in meeting the requirements for average wage ceilings in PSE jobs. In addition, a need exists for information on earnings and benefits in order to assess gains in wage rates of CETA participants before and after program participation.

e. Complementary Information

This division has little need for complementary information at the national level, but recognizes that there is considerable need at the local prime sponsor level. A high need exists for an inventory and description of education and training programs currently operating within a prime sponsor's area of jurisdiction. This information would be used primarily for planning purposes and in the selection of specific institutions and organizations to deliver CETA training services. Given the fact that most prime sponsors have been planning for the delivery of training services since the initial passage of CETA in 1973, DPR staff believe that most prime sponsors were familiar with this type of occupational information within their service areas.

12. National Coordinating Committee, WIN Program

a. Introduction

The WIN program is an employment program for AFDC recipients which serves from 1.5 to 2.0 million families annually. The National Coordinating Committee, which is established by statute, consists of the Assistant Secretary for Employment and Training in the U.S. Department of Labor and the Assistant Secretary for Human Development Services in the U.S Department of Health and Human Development.

The primary activity of the Federal WIN management system is to allocate WIN resources to states on the basis of a statutorily defined allocation formula. These resources are allocated on the basis of how well the states perform on a series of outcome measures: entering employment, welfare grant reductions, retention on jobs, and wage levels. Resources are allocated on the basis of how each state performs with respect to these outcome measures in comparison with the performance of other states. Relative performance in one fiscal year is used in January or February to develop allocations for the next fiscal year.

In addition to providing these resource allocations, the staff of the National Coordinating Committee is involved in information dissemination and the development of training materials with respect to the operations of the WIN program. The basic approach in all of these activities is to provide information to individual state welfare administering agencies. Issues of service standards, intrastate allocation of funds, establishment of state level administrative responsibilities, etc., for the WIN program are resolved at the individual state level.

b. Occupational Supply

Selected items of occupational information are required for the allocation process. However, as the allocation formulas are presently defined, these information requirements pertain solely to selected outcome measures for WIN participants. Occupational information for individuals in the general labor force are not considered in the present allocation procedures.

In addition, the staff of the NCC shares information on exemplary approaches and procedures that have been used by WIN participants to obtain employment. Again, this information is restricted to those techniques and procedures that are most appropriate for members of the AFDC target population and to the types of employment these individuals are likely to obtain.

Given the responsibilities of the NCC, there are very few requirements for occupational information at the Federal level. Information is needed, however, on the number of WIN participants entering employment, their job retention, and their wage levels. This information is required on an annual basis for each state and is included in the formula for allocating WIN funds to individual states.

c. Occupational Characteristics

A need exists for information on average earnings levels on a state by state basis. This information, which should be available on an annual basis, could be used in modifying the WIN allocation formula to take into account the earnings level of WIN placements relative to the overall state measures of economic activity as indicated by wage levels. The potential use of this type of information in modifying the WIN allocation formula is currently under study by the staff of the NCC. However, no formal proposals for modifying the current allocation formula have yet been developed.

A need also exists for information at the local level on occupational characteristics, particularly as they apply to the levels of education of WIN participants and the types of jobs for which they are likely to qualify. Frequently, "local level occupational information systems frequently neglect this type of information for this potential user group, as the primary focus is on higher wage and higher skilled job opportunities in primary labor markets." In developing and organizing occupational information for this target group it is neccesary to have to look at how AFDC recipients with a sixth grade reading level can make decisions and absorb information." Frequently, the major problem is to bring these people to a point of making occupational choices by considering such options as needs for transportation and childcare. In order to address this problem "the types of occupational information needed by this target group at the local level may not be the types of information that is thought of in the usual sense for other target groups."

d. Complementary Information

One element in the WIN allocation formula, the amount of welfare grant reductions, was indicated as highly needed data in the general category of complementary information. This information is needed at the state level of geographic detail on an annual basis and is used as input into the formula for allocating WIN financial resources among all states.

13. Office of Youth Programs, Division of Program Planning and Design (OYP/DPPD)

a. Introduction

The Office of Youth Programs within ETA has responsibilities within the U.S. Department of Labor for administering programs under the Youth Employment and Demonstration Projects Act.

Formal functions include:

- development of knowledge for use in developing new and improved youth employment and training policies and programs;
- implementation of program planning, development, review, and analysis strategies;
- fostering of linkages among youth-serving agencies at all levels, specifically among CETA programs, and other employment and training delivery systems;
- maximizing Federal office staff productivity;
- providing responses to Congress and other interested constituencies regarding youth and youth employment and training programs; and

- recommending appropriate administrative or legislative program modifications or policy classifications.

The major need for occupational information was seen to be at the local prime sponsor, not the national, level. The limited need for occupational information at the national level exists to make local prime sponsors aware of data that are available and to provide some general forecasting in areas of particular occupational or economic significance (e.g., energy-related occupations). "What is needed is more localized data that could be shared with the regional office" for program operations decisions from the national to the local level. The thrust of CETA is decentralization, and therefore "under current law there is no way that the Federal government can impact on the type of training. All we can impact on is the level of dollars flowing from one area to another based on unemployment comparisons. CETA...was specific in identifying that prime sponsors have the absolute right to determine who they spend their money on and/or what activity and services they determine to buy." The national role with regard to occupational information is therefore largely confined to technical assistance to local planning.

One important factor in the OYP perspective on needs for occupational information is that the targeting of CETA generally has been on the supply, rather than on the demand side--e.g., towards providing training to unemployed disadvantaged young people or veterans instead of for particular types of occupations based on estimates of occupational demands. Even where targeting has been occupation-specific (e.g., priority training for unemployed teachers), it has been on the supply side, i.e., toward the class of recipient rather than toward eventual occupations for which recipients might be trained. Youth programs are seen as less oriented towards skills training for specific occupations than toward basic skills, employability skills, and occupational exploration. Vocational education is perceived as being more explicitly concerned with the development of a qualified workforce than OYP, whose programs tend to be more client-centered and concerned with, in many cases, eventual transition into the labor market. A need was expressed to be able "to provide information to the employment and training system as to what the needs are going to be two to five years from now." Better information on the youth dimension (numbers of low income youth by labor market area) might permit more appropriate targeting of Federal funds to youth programs. However, the costs of collecting such data and lack of staff to interpret the data at the national level were seen as inhibiting any future efforts in this direction.

Specific needs by Framework category were limited only to the occupational Demand and Supply categories, and are briefly summarized below.

b. Occupational Demand

At the local level, the need for demand data was perceived as important for the role that local youth employment programs must play directly in state and substate area economic development and in preparing programs for youth employment and training. Estimates of current occupational demand at the local level are essential for program planning and design, and projected demand by occupation permits program planners enough lead time to offer effective programs that increase the possibility of employment for program completers: "For example, if employers needed welders for shipbuilding in Connecticut, they [are needed] now and by the time you could set up a training course and get a welder who could pass all the government certified welding tests, the contract is finished,... and [now] you have a glut of welders." OYP needs to know "what type of training is really being done and is there going to be a need for that training a year or two down the road?" The example was cited of obsolete training programs for plasterers and other construction occupations for which there is little need, since the home construction industry has improved its plastering technology to the point where skilled plasterers are no longer in such high demand.

c. Occupational Supply

Specific information is lacking on the mobility of the workforce and the extent to which for instance, skilled welders needed in nuclear plant construction could move across state lines to take jobs at a locality for which CETA programs were already training welders. Furthermore, if national supply estimates show an oversupply for a particular occupation for which CETA prime sponsors are training clients, without specific data on localities, "you don't know which CETA prime sponsor to 'turn off'." Thus, total aggregate national estimates are of little use unless states and areas are identified with appropriate numerical breakdowns. The point was reiterated that CETA is only one of a number of output sources of occupational supply in an area, and little data are available on the ratio of CETA to other sources of supply. "There's a need to identify who is being trained, where are they, and what does it look like you need over a certain period of time..."

14. Office of National Programs (ONP)

a. Introduction

The Office of National Programs is responsible for administering Title III of CETA. Its responsibilities under this Title may be distinguished from "regular" Titles II and VI CETA programs in that Title III focuses on national organizations. Under Sections 301 and 304 of CETA, ONP is concerned with national organizations who are operating training programs for the disadvantaged. Under Section 302, the ONP oversees CETA programs for Native Americans. Its responsibilities in this regard are similar to those of the DOL regions, as the various tribal councils provide their employment and training services in an administrative structure similar to that of prime sponsors. Under Section 303, ONP oversees programs to state organizations that provide employment and training services to migrant and seasonal farm workers. A particular focus of these programs is to develop skills among migrant youth in order to provide opportunities for them outside the migrant streams. In addition to these responsibilities under Title III of CETA, ONP is responsible for monitoring programs administered under Title V of the Older Americans Act to place individuals aged 55 and over into subsidized occupations.

In carrying out these responsibilities, ONP is involved in reviewing applications, monitoring performance, reporting project results, developing guidelines and regulations, and providing technical assistance. While the staff of ONP does not initiate legislative activities, they are frequently called on to provide reactions to legislative proposals and to assist in assuring that the opinions of their national constituency groups with respect to proposed legislation are brought to the attention of the appropriate executive and legislative bodies.

The responsibilities of ONP vary depending on the capabilities and experience of the various national groups with whom they deal. In general, the staff of the Office spends relatively more time providing technical assistance to Native Americans and to migrant organizations it does to other national groups with whom it deals.

In carrying out these responsibilities, the staff of ONP uses a variety of occupational information. The predominant use of this information is in the review of grant applications and/or project proposals that reach the Office from national organizations. A large proportion of these proposals are from national organizations familiar with CETA activities, with whom the Office interacts. However, the staff of the Office is occasionally requested to review project applications from groups who are not familiar with the CETA process and consequently may not be familiar with sources of local occupational information. In these cases, the staff of ONP suggests the appropriate sources to potential applicants in order that they may develop and submit appropriate applications for funding.

b. Occupational Demand

A need for occupational demand data is evidenced in the requirement that all training conducted under Title III must focus on identified skill shortages in the local area. In addition, there has to be a job available at the conclusion of the training, with the application containing a letter or letters of commitment from specific employers who indicate they will hire trainees at the conclusion of the training process. Within this framework, the role of ONP staff is to review project applications and to verify information on local labor market demand when necessary as part of the project approval process.

Accordingly, ONP has a high need for current occupational demand, employment by industry, and information on construction activities in local areas, which is generally available from reports from the F.W. Dodge Company. This information is needed at the local labor market area level of geographic detail. Furthermore, "the information is needed for specific semi-skilled occupations on a quarterly basis, due to the fact that project applications are received by ONP throughout the year and are verified at the time that the application is submitted."

With respect to these more or less regular application review activities, most of the occupational demand information needed is available from BLS or ES publications. Even though the appropriate information might be available in a written report, ONP staff frequently verify this published information through telephone and other contacts with local officials in the local area from which the project application was submitted.

One area of deficiency with respect to identifying skill shortages is related to new and emerging occupations, particularly the retraining of workers for skill shortages in energy-related occupations. It is difficult to determine the extent of these shortages, as these occupations are currently emerging, are not clearly defined, and do not have their needs clearly summarized in regular BLS or ES publications.

c. Occupational Supply

The major need for supply data cited by ONP is for qualified unemployed workers. Again, this information is used in reviewing project applications, as ONP will not approve funding of a training project for a specific occupation if a sufficient number of qualified but unemployed workers are available in the local labor market area to fill the job openings indicated. This information is also needed for local labor market areas and for specific semi-skilled occupations. The respondent noted that "the information needed on qualified, currently unemployed is usually available at the level of detail required from regular BLS or ES publications."

Information on net migration was also cited as needed in conjunction with national programs to train workers in depressed industries, such as automobiles, rubber, and textiles. A definite preference for specific occupational or geographic detail is not present as "this would vary, depending on the particular industry for which training is being provided." Net migration information is needed on an annual basis but should not include a greater than two-year projection timeframe. Again, if this information were available from either the NOICC or from appropriate SOICC's, the ONP staff would still verify the published information through follow-up telephone calls and other means to assure that it was still relevant to the current problem.

d. Occupational Characteristics

Occupational characteristics information is needed by ONP to review the adequacy of training plans proposed in project applications to ONP and to assure that trainees were placed in appropriate jobs upon completion of their training activities. This information is needed on a local labor market area basis for specific semi-skilled occupations. ONP's responsibilities are restricted to occupations that do not require a degree and that do not have a licensing requirement. Specific information elements needed include earnings and benefits, job duties, work settings/conditions, demographics of workers, major employers, hiring channels, and occupational titles and descriptions. The information on demographics of workers is needed primarily with respect to assessing the characteristics of trainees included in national programs. All trainees must be economically disadvantaged as defined in all CETA regulations, and 50 percent of the trainees must be minorities. In addition, current regulations call for at least 20 percent of the trainees to be women and at least 25 percent to be veterans. Although ONP is not interested in education/training skill acquisition patterns or education/ training requirements, the ONP staff does review proposed training plans to assure that they are appropriate to the titles and descriptions of the occupations in which trainees will be placed.

e. Complementary Information

ONP is interested in inventories and descriptions of education and training programs in order to assure that the training proposed by national organizations does not duplicate something that is already available within the local labor market area. Assurances of nonduplication are obtained through the CETA/ES system by requiring potential grantees to present their proposed training activities to the appropriate local CETA prime sponsor prior to grant submission to ONP.

D. National Center for Educational Statistics

1. Division of Post-Secondary and Vocational Education Statistics: Systems Design and Analysis Branch (DPVES/SDAB)

a. Introduction

A primary responsibility within the Systems Design and Analysis Branch is to provide NCES staff support for the development of the Vocational Education Data Reporting and Accounting System (VEDS). As authorized by PL 94-482, the primary requirement for VEDS is to provide a national reporting system to generate uniform data from the states and also to enhance the decisionmaking ability of Congress with respect to the establishment of vocational education policies. These data will also enhance Bureau of Occupational and Adult Education activities in priority setting and program management and provide each state with a reliable mechanism for monitoring and managing its own delivery of vocational education. In addition, the states will have equivalent data with which to make comparisons of program performance and outcomes. With more objective and uniform data made available on the operation of statewide vocational education programs, the State Education Agencies will be in a better position to produce program outcomes responsive to the different needs of their students. State Education Agencies will also be better able to respond to the new and emerging needs of business and industry for trained workers.

More specifically, the legislative foundations for the development and operation of a National Vocational Education Data Reporting and Accounting System are set forth in Title II, Section 161(a) of Public Law 94-482, Education Amendments of 1976, as amended by PL 95-40. As stated, the Commissioner of Education and the Administrator of the National Center for Education Statistics shall jointly develop by September 30, 1978 information elements and uniform definitions for a national vocational education data reporting and accounting system. This system shall include information resulting from the evaluations required to be conducted by Section 112 (PL 94-482) and other information on vocational:

-- students (including information on their race and sex),

-- programs,

-- program completers and leavers,

-- staff,

-- facilities, and

-- expenditures.

The act also requires [Section 112(b)] specific evaluation activities. Each state shall evaluate the effectiveness of each program being assisted with funds available under the Act. For each program which claims to impart entry level job skills, evaluations will be performed to determine the extent to which program completers and leavers: (a) find employment in occupations related to their training, and (b) are considered by their employers to be well-trained and prepared for employment.

In addition, each such program shall also be evaluated according to at least one of the following criteria, which measure the extent to which program completers and leavers:

-- earn a wage commensurate with the wage customarily paid in the occupations related to their training at their level of experience,

- -- progress in occupations of their choice,
- -- are satisfied with their occupations,
- -- are satisfied with the training they received, or
- -- upgrade their skills through additional education or training.

Within nine months after the close of each fiscal year, the Commissioner of Education shall prepare and submit annually to the Congress a report on the status of vocational education. This report shall include information from the VEDS and other information system plus an analysis of such data. The Administrator shall also have the responsibility for the design, implementation, and operation of the reporting and accounting system as well as for preparation for annual data acquisition plans and interfaces with NOICC and CETA information system development efforts.

The VEDS program has been set up for basically programmatic rather than for statistical purposes. Furthermore, it is the only mandatory data collection program within NCES in which state vocational education agencies must participate as a condition of receipt of Federal funds. Although the data collection components of the VEDS system were established to collect information only with respect to programs funded under each state's Vocational Education Plan, the entire system is set up to provide Congress with an overall picture of vocational education in the U.S. Therefore, the system provides an opportunity to establish a basis for more informed policymaking with respect to vocational education programs.

In order to fulfill the responsibilities outlined above, the Systems Design and Analysis Branch will both produce occupational information through the VEDS system and require additional occupational information to generate the annual report on the status of vocational education. The current VEDS system includes a number of reporting forms, which may be summarized as follows. A Program Enrollment and Termination Report, which provides essential information on students, including race and sex, programs, and program completers and leavers; a Teacher-Staff Report, providing basic information on teachers and other staff in vocational education; a Financial Status Report, which provides essential information on the expenditure of funds on vocational education and the number of persons benefiting from certain categories of those expenditures; a Completer/Leaver Follow-up Report providing the actual results of each state's activities in the follow-up of program completers and leavers, and a Employer Follow-up Report, which provides the actual results of each state's activities in the follow-up of employers of former vocational education students. The responsibilities of the Branch generate a substantial need for occupational information, which may be summarized as follows.

b. Occupational Demand

As implied above, the VEDS system does not collect information on occupational demand. However, there is a high need in the agency for this type of occupational information, specifically with respect to developing the required report to Congress on the status of vocational education in the U.S. The data are required annually for each state at the 4-digit SOC level of occupational detail. Since these data are not currently available through a national system, at present the data are being obtained from data in currently available statistical reports. However, "in the long-term, I would hope to get the great majority of my economics and demographics that are related to training straight off the OIS." However, it is doubtful that appropriately standardized data for NCES needs could be obtained from a series of independently-designed occupational information systems at the state level.

c. Occupational Supply

There is also a high need for information on enrollments in and completers/leavers from educational or training institutions. Consistent with the requirements for occupational demand data, this information is needed annually at the state level and in a form that can be readily translated into the 4-digit SOC level of occupational detail. At the present time, this information is needed primarily for knowledge development purposes and for reporting to both Congress and back to individual states.

d. Occupational Characteristics

There is a high need in the Branch for information on earnings and, benefits, occupational titles and descriptions, and a low need for the other items in this major category. The need for information on earnings and benefits was cited with respect to the suggested evaluation measure for vocational education programs contained in PL 94-482. The need for information on occupational titles and descriptions is necessary to develop information on the linkages and career patterns between vocational education programs and subsequent employment opportunities. As with other data elements, this information is needed types of educational activities. With increasing interest in adult education activities, this survey is assuming a more important role in providing a description of current activities in this area.

The second major survey is of postsecondary occupational education institutions. The results of this survey, which is administered in even-numbered years, are used to develop an occupational education directory. The basic survey instrument collects information on names and addresses of postsecondary occupational education institutions as well as a list of all programs offered together with their enrollments by full- and part-time status and by sex. A supplementary long-form questionnaire is administered to a 20 percent sample of the institutions to collect a variety of information on an educational program basis. Specific data elements include charges, linkages of program, numbers of completers, numbers of leavers with marketable skills, and numbers of program dropouts.

The third major survey activity of the Branch is a survey of characteristics of students enrolled in occupational education programs. This survey, which is administered in odd-numbered years, is based on a sample of approximately 550 schools and a total respondent population of approximately 8,100 students.

In its function as a data generator, the Branch uses occupational information primarily for knowledge development. This information is provided to a number of user groups--Congress, educational institutions, public interest groups, guidance counselors, SOICC's, etc. Due to limited staff resources, the Branch is unable to undertake any extensive analyses of survey data. Survey results are reported primarily in on an annual basis for each state. Furthermore, it is needed at the 4-digit level of SOC occupational detail. There data will be used in both the knowledge development and policy development functions by the Department of Education. Furthermore, they will be presented in the annual reports to Congress on the overall status of vocational education in the U.S. In addition, information in this annual report will be used by individual states in their own policymaking and legislative development processes.

e. Supply Demand Information

A high need exists to conduct analyses of supply/ demand imbalances. Again, this information is required for the annual reports to Congress on the overall status of vocational education in the U.S. It is needed at the state level of geographic detail and at the 4 digit SOC level of occupational detail.

2. Division of Postsecondary and Vocational Education Statistics: Adult Vocational Surveys and Studies Branch (DPVES/AVSSB)

a. Introduction

As part of the Division of Postsecondary and Vocational Education Statistics, the Adult and Vocational Surveys and Studies Branch is primarily a generator rather than a user of occupational information. The Branch is responsible for three recurring surveys in the general areas of adult and vocational education.

The first is a survey of adult education which is administered as a supplement to the Current Population Survey. This survey is administered every three years and collects information on the demographic characteristics of adult members of the population who are engaged in various descriptive, tabular form with a sometimes lengthy timeframe between initiation of survey activities and publication of final survey results.

The Branch's specific occupational information needs are specified in the Supply and Complementary Information categories as detailed below.

b. Occupational Supply

A high need exists for information on enrollments in and completers/leavers from educational or training institutions. This information supports the Federal knowledge development and policy development functions. It is provided from both the student characteristics and institutional surveys. However, information from the institutional survey is developed from a sample of institutions that provides more detailed information on enrollments, charges, etc. of occupational educational programs.

Complete information from the student characteristics survey is available only for the national level. The supplementary information from the institutional survey is only available for certain states. However, selected SOICC's (e.g., Illinois) have pressed for the implementation of the full-scale survey in their state jurisdictions.

These surveys use the USOE Handbook's six classifications of educational programs to report occupational supply information. Census of Population Codes are used for those data elements in which information is collected on the type of job subsequent to participation in an occupational training program. However, the Branch is prepared to switch to the SOC occupational classification when final, definitive specifications of this classification system are developed.

A number of groups are interested in and use information from these surveys to meet a variety of information and planning needs. These included "...members of Congress and their staffs, special interest groups representing women and ethnic minorities, the U.S. Office of Civil Rights, and the SOICC's themselves."

c. Complementary Information

The need for complementary information is reflected in the institutional survey to provide an inventory and description of education and training programs and the survey of adult education at the individual institutional level. Since ZIP code addresses are available for each institution, these data can be aggregated for a variety of areas: ZIP code areas, SMSA's, labor market areas, Congressional districts, and states. The information is provided on a biennial basis and is used to inform the public of the availability of education programs. The survey has been mandated by Congress to provide additional information on occupational education activities in order to support the development of future legislative initiatives. In addition, as indicated earlier, the results are used extensively by state educational agencies and SOICC's in planning for occupational education programs.

The survey of adult education, implemented on a triennial basis, provides information on the characteristics of individuals enrolled in a variety of adult education activities. Although initiated primarily to support the Federal knowledge development function, the results of this survey are being increasingly used by institutions of higher education as they seek better information to provide educational programs to this population group in the light of declining numbers of traditional age groups from which their enrollments are drawn. Accordingly, this survey may be administered with increasing frequency in the future, as there have been increasingly frequent requests for an annual rather than an triennial administration of this survey effort.

Finally, there is a high priority need for additional occupational information at the state level, related primarily to filling in existing gaps with respect to the numbers of individuals enrolled in occupational education programs and their specific program outcomes. Specifically, there is a need to "obtain information on enrollments, dropouts, and those who leave the educational program with a marketable skill prior to graduation in two- and four-year colleges and universities." When fully implemented, the VEDS program will collect this type of information from community colleges and from public noncollegiate postsecondary institutions. The Adult and Vocational Surveys and Studies Branch will continue to collect this information for private noncollegiate postsecondary institutions. However, given the existing data collection plans, this type of information will not be collected for those enrolled in occupational education programs in two- and four-year colleges and universities. Instead, these individuals fall within the HEGIS data collection framework, which focuses primarily on numbers of degrees awarded rather than the types of educational process variables described above.

3. Division of Postsecondary and Vocational Education Statistics: University and College Surveys and Studies Branch (DPVES/UCSSB)

a. Introduction

The University and College Surveys and Studies Branch is responsible for administering the Higher Education General Information Surveys (HEGIS). The 1979-80 HEGIS is the fourteenth in this annual series. The survey package is divided into five major areas of interest: institutional characteristics, students, finance, faculty, and libraries. The various portions of the package are scheduled for return at those times when the data become available at most higher education institutions.

The HEGIS data are used for administrative, analytical, and policy-making purposes by the Congress, the U.S. Department of Education, other agencies of the Federal Government, state agencies, institutions and associations of higher education, and private organizations and foundations. Although most of the data are published in the aggregate, some are also made available by educational institution.

As implied by the above description of agency function, the University and College Surveys and Studies Branch, as are other organizational units within NCES, is primarily a producer rather than a user of occupational information. Furthermore, the principal priority within this branch is to publish information from the various HEGIS surveys as quickly as possible in order that other people may use it for their purposes rather than to conduct extensive analyses of the information within NCES. In addition to the various groups cited above, members of Congress and their committee staff appear to be major users of this information, as many of the surveys provide critical information to Congressionally-mandated reports (e.g., the annual required report on the Condition of Education).

However, in one sense, the University and College Surveys and Studies Branch expressed a need to become a user rather than a producer of educational statistics. This example was related to study and analysis of higher education as an industry. A need was cited for information on employment, wages, turnover, and other data elements in order to provide an informed basis for policymaking with respect to this specific industrial and occupational labor market.

Prior to discussing specific needs for occupational information, two specific concerns were expressed with respect to development of occupational information systems by either the NOICC or the SOICC's. The first was with respect to the development of a taxonomy or reporting system that might be in conflict with current systems used in the HEGIS package. Problems were encountered in revising the current package, particularly with respect to integrating the taxonomies of education curriculum descriptions for vocational education and higher education. A desire was expressed to avoid similar technical difficulties in the future: "If I can just go ahead and do what I am doing and if this somehow feeds into a state system, then that will be fine with me." Second, it was suggested that two or more possibly conflicting purposes should not be designed into one data collection system. An example stated was a system to collect information on enrollments in higher education. The University and College Surveys and Studies Branch needs this information by October 15 of each year in order to prepare a report on higher education enrollments for submission to Congress by a specified date. Individual states need these data for different needs and on different time schedules, and they have developed elaborate data collection systems to meet their needs, with the result that much of the required data are not available to the Branch in a timely fashion. In essence, the point was made that implementation of individual state occupational information systems should minimize conflicts with scheduling and reporting requirements of various Federal agencies, particularly when these reporting schedules support Congressionally mandated studies. Specific needs for occupational information, by major data category, follow.

b. Occupational Demand

A high need exists for information on current and projected occupational demand and employment by industry. This information would be used to study higher education as a separate industry. The need exists for information on a national basis and for major disciplines in higher education. The need for employment by both industry (higher education) and occupation, (major academic disciplines within higher education), on an annual basis, was cited. This information is needed to provide a base of support for policy development, particularly with respect to identification of issues and policy options related to faculty tenure and retirement patterns. In addition, it can be used to determine whether there is an oversupply of college teachers and to provide limited information on the quality of academic instruction, particularly as it relates to the types of academic training received by faculty members in specific academic departments. Some of this needed information, specifically employment by industry data, is currently provided by an NCES survey on salary, tenure and fringe benefits of full-time instructional faculty in institutions of higher education.

c. Occupational Supply

A need exists for information on enrollments and completers from educational and training institutions and on net migration of students enrolled in higher education. Information in the former category is used to describe the current status of the nation's higher educational system: This information is needed at the national, state and individual institutional level on an annual basis, and is being provided by current NCES surveys.

Information on net migration of college students is needed for input to state-level educational policy development. Although in a strict sense this information is not related to local labor markets, nevertheless, it is necessary in order for individual state higher educational governing boards and legislative bodies to determine tuition rates for out-of-state students. This information is currently provided at the state level on a biennial basis through an NCES survey of residence and migration of college students.

d. Occupational Characteristics

A high need exists for information on earnings and benefits, demographics of workers, and career ladders. This information is needed for various faculty disciplines in higher education in order to identify issues and policy options related to faculty tenure and retirement. National level information on earnings and benefits is currently provided on an annual basis through an NCES survey. However, information on demographics of faculty members, particularly age, sex, and ethnic data, and on the effects of existing tenure patterns and age distributions of workers on career ladder opportunities, are not available.

e. Complementary Information

With respect to complementary information, the role of the University and College Surveys and Studies Branch is to provide selected descriptive information on education and financial assistance programs. This information is provided on an annual basis at the institutional, Congressional district, and state level, summarized by type of institution (e.g., two-year, four-year) and method of control (i.e., public, private). This information is provided to state educational administrators, Congress, and students on the location and characteristics of various accredited institutions.

There is also a high need for additional information on financial assistance programs, particularly information on the numbers and characteristics of students receiving financial aid. This information is particularly important for policy purposes in view of the recent increases in resources for student financial aid.

4. Division of Elementary and Secondary Education Statistics: Population Surveys Branch (DESES/PSB)

a. Introduction

The Population Surveys Branch is in a separate Division of NCES than the other branches whose staff were contacted during the current study. The occupational data concerns of the Division of Elementary and Secondary Education Statistics are related to the labor markets for teachers and other staff at the elementary and secondary education level. Within this overall framework, the mission of the PSB is primarily to administer two Congressionally-mandated surveys. The first is a survey of teacher demand and shortage, while the second is a survey of recent college graduates, with a special emphasis on the labor market experiences of recent graduates from educational curriculums.

Results of these surveys and other surveys and studies are used primarily to provide an information base for policy planning purposes.

In addition to survey activities, the Branch recently sponsored an analysis of alternative projections of the demand and supply for elementary and secondary teachers. This study also addressed the effects of various policy options for alleviating supply/demand imbalances that are likely to occur in the 1980's.

The major functions of the Population Surveys Branch are therefore related primarily to the development of a knowledge base for informed decisionmaking. The Branch focuses on the elementary and secondary education "industry" and addresses issues of both demand and supply within this industry. Major constituency groups include the Schools of Education in higher educational institutions, since this group is interested in job opportunities and potentials for graduates for their programs. Information is provided on the supply side of the teacher labor market, as survey data indicate the types of occupations into which these graduates move. However, staff are also interested in occupational demand information in order to provide additional interpretation and analysis of supply information.

b. Occupational Demand

There is a need for information on projected occupational demand within this category. This information will be used to provide support for the policy development and resource allocation functions within the Federal government. This demand information should be provided on a national basis and at an appropriate level of occupational detail that could be tied to planning for enrollments in broad educational teaching curriculums.

In particular, these data will be used to assess the demand for teachers of specific skills. "The Population Surveys Branch could use demand information (which could be supplied by NOICC) as background information and for further analytic studies in an attempt to try to make their information (on teacher supply) a little more useful in their publications." Furthermore, there is a need to obtain information on the implied demand for teachers. That is, information is needed on projected demand for workers in various industries and occupations (e.g., carpenters, engineers) which would in turn lead to an increase in demand for teachers to provide the necessary education and training for these workers.

The linkages between demand for technical training at the post-secondary level and the types and qualifications of teachers needed at the secondary level are also recognized. Information, for example, on projected increase in demand for workers in technical occupations such as engineering can lead to an increase in demand for college teachers in engineering schools which may in turn lead to an increase in demand for improved mathematics instruction at the secondary level. It was emphasized that the Population Surveys Branch needed this information primarily in an indirect way to assist in the interpretation of their presentation of information on teacher supply. Finally, there is a high need for information on turnover rates by occupation, particularly as it affects the development of estimates of replacement demand for elementary and secondary teachers.

c. Occupational Supply

Information on recent college graduates, needed by the Branch to meet Congressionally-mandated information reporting requirements, is provided through the survey of recent college graduates. This information is needed on both the national and major regional levels (i.e., major Census regions) and at a level of occupational detail that can be tied to major educational curricula. In addition to meeting the requirement for Congressionally-mandated information, this information provides a basis for developing a more complete description of the labor market for elementary and secondary teachers.

In order to develop more complete information on this labor market, a critical need exists for information on net migration. In particular, information is needed on the flows of new entrants and re-entrants into the teaching field, specifically with respect to the numbers of former teachers who return to teaching after childbearing.

Specific levels of occupational detail were not indicated, but the need to tie this information to major educational curricula and major teaching specialties was recognized. National information of this type might, however, conceal some potentially major regional imbalances. Accordingly, "states might be an inappropriate level of geographic detail because state boundaries impose some artificialities with respect to the functioning of labor markets for elementary and secondary teachers."

Finally, to the extent that either new entrants or re-entrants are unable to obtain employment in teaching occupations, these data would provide information to educators on the types of jobs obtained by graduates of higher education teacher training programs.

d. Occupational Characteristics

Information on occupational characteristics is needed, but to a lesser degree than either of the former two categories. Earnings and benefits, job duties, work settings/conditions, and education/training requirements data are used to develop information on the types of jobs held by those trained in teaching but who do not enter the teaching profession. A major constituency group for this type of information is those officials of schools of education (e.g., deans) who have specifically asked the Division and Branch staff for information on the kinds of jobs obtained by graduates of schools of education. The national level is the appropriate level of geographic detail for this type of information. Occupational detail should be provided in terms of major teaching specialties.

e. Supply/Demand Information

A high need exists for information on matching occupational supply and demand. This information is needed to support policy development with respect to elementary and secondary teacher supply and demand imbalances and to respond to Congressional mandates. Again, this need exists for subnational level of geographic detail, and for major teaching specialties.

E. The Rehabilitation Services Administration

1. Introduction

The Rehabilitation Services Administration (RSA) was created in September 1973 by the Rehabilitation Act (P.L. 93-112). RSA is the Federal partner in the state/Federal vocational rehabilitation program, and the agency mission, as mandated through original legislation, has been to provide quality vocational rehabilitation services to eligible handicapped individuals leading to maximum participation in gainful employment. Amendments to the Rehabilitation Act in 1974, 1976, and 1978 have extended services to deaf-blind youth and adults; to other handicapped individuals with poor employment prospects; and, through comprehensive services for independent living, to those individuals whose disabilities are so severe they are not currently employable. Thus, while the ultimate goal of the agency is to place handicapped persons in gainful employment, the addition of the independent living concept in the 1978 Amendments (PL 95-602) expanded the scope and focus of RSA-funded services to the severely handicapped without requiring immediate employability as a goal.

The new independent living (Title VII) provisions therefore imply a lowering of the age limit for these services, which although never mandated, was de facto in place because of the employability criterion (i.e., 16 or older) for RSA program client eligibility. This shift in agency focus as a result of PL 95-602 is fundamental in reducing the emphasis on immediate potential for employment, concentrating rather on services enabling individuals to live and function independently.

Major changes are likely within the RSA organization, and functional responsibilities are likely to change as parts of the agency move to the newly created Department of Education. In addition, final regulations for the 1978 Amendments were not yet published at the time of these interviews. Accordingly, some ambiguity was to be expected in perception of agency functions specifically related to the use of occupational data under the new legislation. The two RSA offices represented in these analyses are the Office of Program Development and the Office of Program Operations; and the four RSA divisions from whom staff members were available for these interviews were the Division of Manpower Development, the Division of Program Assistance, the Division of Basic State Grants, and the Division of Rehabilitation. Each have some needs for occupational information.

2. Office of Program Development, the Division of Manpower Development

a. Introduction

This Division, under Sec. 304 of PL 95-602, furnishes grants for in-service pretraining of professionals and paraprofessionals to provide vocational, medical, social, and psychological rehabilitation services to handicapped individuals. The Division reviews grant applications from states and public or non-profit agencies including higher education institutions, recommends funding, and in coordination with Regional Offices monitors grants awarded under this section of the Act. The major objectives of such grants are: (a) to assist in increasing the numbers of personnel trained in providing these specialized vocational rehabilitation services, and (b) to improve the quality of professional practice in these areas. Allocation of scarce resources to areas of greatest training needs presents the greatest problem for which occupational information is needed.

b. Occupational Demand

The need for occupational information in this division of RSA is predominantly within the Division of Manpower Development. This need is related to the factors considered in evaluating applications, which include determining the extent to which other training programs in the same field are available in the state or region, and in particular, obtaining information on the employment outlook for graduates of the training programs funded by these RSA grant monies. For example, if RSA "knew that state agencies or private industry will be hiring rehabilitation job placement specialists, then we have a justification for funding more of those training programs." The geographic profile of need for specific specialties is important. "If we have a surplus of rehabilitation counselors on the East Coast, should we continue to fund rehabilitation counselor training programs? If we have a need for Masters Degree rehabilitation counselors in the West, we should have more programs out there. We do not have the data that help us make these decisions. The grantee is always saying there is a tremendous need, and then we have information coming from the state agencies... saying we have a surplus." Funding decisions might be more informed and services correspondingly more efficiently delivered with improved information on needs by geographic area and by specific professional or paraprofessional category or discipline.

Data are needed on the occupational structure relating to graduates of vocational rehabilitation services training programs, particularly distribution of agencies, organizations and industries in a state which offers potential employment to these personnel. Then, "you would begin to know what are the employment opportunities within that state area... if you know that (there are) rehabilitation centers or sheltered workshops in that state, you can then project that you're going to need staff to fill that (requirement)...If we could have some...data like that, and I knew that we were training 50 vocational evaluators and there were 350 potential places of employment for them, yet less than a third went into those places, then I would say I need to look further: (a) was their training inappropriate, which means that the grant was not being run right? or (b) are there no openings, and therefore we do not need to train additional (staff)?" Information is also needed on job openings in specific occupations and wage and salary levels to determine reasons for post-training occupational decisionmaking by program graduates.

Finally, data are required on projections of need for trained vocational rehabilitation personnel by occupation. "Can NOICC begin to predict for us that it looks as if within five years there is going to be an increased need, (so that) we can begin to gear up again (for that need)...Instead what we do is play catch-up and then we are still catching up when the need has dropped off, funding something when the need has decreased and it has taken us a while to turn around."

In addition to the grants process described above, the Commissioner of RSA is required by Congress under the 1978 Amendments (Sec. 304C) to determine training needs for personnel necessary to provide services to handicapped individals and to develop a long-term rehabilitation manpower plan designed to target resources on areas of personnel shortage. RSA is currently contracting for special studies to meet this requirement. A major problem in using existing data to fulfill this mandated obligation (which translates into a clear occupational information need) is the existence of a major occupational difference between rehabilitation and vocational rehabilitation. Physical therapists, for example, habilitate or rehabilitate individuals who have suffered disease or disability or injury in order to assist that individual in becoming functional, but the primary focus of their service "is not to get that person back to work." A physical therapist who concentrates on a goal of gainful employment for the individual being treated may need extra training to prepare people for work and to understand the existing vocational rehabilitation system and, correspondingly, will have distinctly different skills after training. A "speech pathologist" may be trained primarily for pediatric populations and not for the preparation of "physically or mentally handicapped adults" for employment, particularly those handicapped adults who are eligible for participation in the Federal/state vocational rehabilitation system.

Determining precise needs for such trained professionals is thus difficult--"we know that we need X number of people generally-- the American Occupational Therapy Association or the American Speech and Hearing Association can tell us that we need (so many) speech pathologists and audiologists, that is very nice information...(but) how many do we need in vocational rehabilitation? Nobody knows. It's not good enough. We are trying...to come up with justifiable information, but..."

These data should be provided to on an annual basis to coincide with the RSA planning cycle for the fiscal year funding process. Geographical detail for Federal purposes is at the Federal, region, or state level, with the additional need to identify broad substate urban/ rural designations because of the difference in rehabilitation needs of urban/ rural client populations. The possibility exisits for maldistribution of services within a state by rural/urban areas, and to a lesser degree, by differences in client characteristics in urban/rural areas. Moreover, caution should be exercised when interpreting specific geographical area data on training needs, since programs often train for regional or interregional catchment areas.

Optimum timing for projections is three to five years, since programs are often funded for more than one year; and "two- or five-year... projections would enable us then to...reallot the money more appropriately or justify where we are allotting it now." In view of RSA's anticipated move toward greater involvement with the mentally retarded, data are also needed on new and emerging rehabilitation occupations for professionals and paraprofessionals for which current training opportunities may not exist. Job analysis of existing occupations may be needed to determine whether merging of disciplines (e.g., physical therapy and rehabilitation psychology) is effective as a training strategy to deal with this shift in RSA emphasis.

c. Occupational Supply

Follow-up information on graduates of training programs is perceived to be useful in funding decisions in the following manner: "if we see that we're training in a particular disability area, and those people (are followed up) and we see that not one of them is going into (that area), then you better believe we are not going to put money in there. We would rather put our money into another category where we see that these (trained) people are really providing a service to those vocational rehabilitation clients." Data are needed by occupational type, age of population served by program graduate, educational level, by ethnic and disabled status of graduate, and by salary level. This information also has policy implications for not only training program development but also for RSA goals as an agency. RSA long-term policy goals should be sensitive to information on the occupational progress of graduates. If, for example, program graduates were consistently not entering high demand occupations on the grounds that the salaries were too low, a policy option for RSA might be to recommend less expenditures on training and more on salaries.

d. Occupational Characteristics

Decisions need to be made on whether to fund training programs directed towards new graduates or towards upgrading or retraining currently employed graduates. "Do we put more money into preservice training or...into post-employment training? That's another kind of data base that would be helpful to us." For example, young people handicapped as a result of an earlier rubella epidemic are now approaching the age where they become eligible for vocational rehabilitation services nationwide. Decisions would have to be made on whether to retrain professionals or increase the number of new professionals with skills to deal with the special needs of this new population. Since one of the criteria for funding is the extent to which programs offer training opportunities for handicapped and particularly minority handicapped groups, data on the distribution of these persons throughout the professional work force are needed. Other needed data would include numbers, distribution and location of currently employed persons providing services to the disabled, by area of specialty, and numbers of individuals needing services, by type of handicap or disability. Information on training opportunities and specific training programs offered or licensing or registration requirements is "nice to know," but in the estimation of RSA personnel, it is more easily gathered internally by the vocational rehabilitation system itself than provided from external sources.

Data are also needed at the Federal level on the nature, staffing patterns, and service populations of given rehabilitation settings or facilities which are vendors of direct services to the disabled and handicapped. Currently, "the personnel in those facilities is something we just do not have a handle on. We just do not know how many of any given type of professional personnel are employed in the facilities... the level of [their] training...how much they participate in post-employment training--that kind of data about our provider personnel are just not available. We don't even know for sure how many facilities there are. We [only] have a very rough estimate."

3. Office of Program Operations, the Division of Rehabilitation, Division of Program Assistance, and the Division of Basic State Grants

These divisions are responsible for the Title I authorization of grants to states to assist handicapped individuals to prepare for and engage in gainful employment to the extent of their capabilities. Under Section 101 of the 1978 Amendments, states are required to submit to RSA state plans for vocational rehabilitation services for a three-year period. These plans must, among other requirements, provide for: (a) periodic review and reevaluation (at a minimum, annually) of the status of handicapped individuals placed in extended employment in rehabilitation facilities, and (b) maximum efforts to place such individuals in such employment and training whenever it is determined to be feasible.* Although state plan review takes place largely in the Federal regional offices, the Washington Office directs program policy and operations of the Title I state vocational rehabilitation service programs and correspondingly oversees the state planning process for Title I programs. The regional offices have approval, but not disapproval, authority over state plans, with only the Commissioner RSA able to disapprove a state plan. The state plan serves not so much as a planning document, but as a legal documentation of assurances from eligible states that Federal requirements will be met and programs will be operated in accordance with Federal regulations. Targeting priorities focus on degree of severity of handicap rather than, for example, on occupational demand for particular skills. States are not required to provide occupational information in their state plan, either on needs of client populations for services or potential occupational demand for handicapped persons seeking employment. The periodic review and evaluation studies referred to above are referred to on the form of assurances in the plan, but no data from such studies are required to be included in the plan itself.

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*State Plan for vocational rehabilitation services; Program instruction, USDHEW Office of Human Development Services, Washington, D.C., May 1979, p. 34.

The occupational information needs of the Office of Program Operations are limited in that specific requirements for occupational information are not included in the state plan regulations. Not only are planning decisions generally different from other service agencies in that they tend to be more directly client-centered, but occupational "typing" for certain kinds of disabilities may be inappropriate. "We do little here (in this office) in terms of identifying training needs (to equip handicapped persons for employment) out there. We don't deal (directly) with jobs for the handicapped out of this office...that is a job that the counselors,...the supervisors, and the state agencies are responsible for; they have to deal into this on an individual case basis... you don't say all blind people do this kind of a job, or all people in a wheelchair do that kind of a job, or they don't do that job because they can't [and then] you find that they can!" There is a substantial ongoing effort within the Office of Program Operations to determine management information needs of the agency, including data routinely provided on case histories and characteristics of rehabilitated clients by states on Form SRS-RSA-300, the case service report. Lack of staff resources limit the capability within RSA to analyze and disseminate results of analyses of existing data, and staff who were interviewed indicated that such resource constraints inhibit the agency's capacity to deal with more occupational information than the Office currently receives. Formal responsibility for program monitoring and evaluation is distributed through more than one organizational component in RSA, both within and outside the Office of Program Operations. The 1978 Amendments provided major evaluation responsibility to the National Institute of Handicapped Research. The individualized approach of RSA to employability potential, characterized by the individualized written rehabilitation program containing long-range employment goals, decentralizes the responsiblity for rehabilitation service clients' gainful employment to the individual level, which reduces the need for generalized occupational data at the national level.

There is, however, a need for longitudinal data on the effectiveness of state programs in training handicapped individuals for gainful employment and the occupational progress of handicapped persons placed in employment. Cooperative research is planned with the Social Security Administration to begin to provide such data. In order to respond to Congress, the President, and the public on the effectiveness of vocational rehabilitation programs, data are needed on numbers and types of clients served, numbers and types of clients rehabilitated, on placement and follow-up of these clients by broad occupational category (not individual DOT code). These data are also needed by specific substate locality by state administrative personnel and counselors, although the uses of the data may be different. Individual counselors in Texas, for example need and are currently using job bank information to assist in client placement.

In summary, however, the role of the Federal Office of Program Operations is not perceived to involve the provision of information to assist the states in placing handicapped individuals, with the possible exception of some projections of particular industries with occupational opportunities for the handicapped. The Office is principally concerned with analyses of state-generated empirical data on program operations. "We do not say that a state has to have--(and I don't think many of the states really do it either)--to place X number of people in a specific... occupation. I don't think they target to any occupation. They just say we are going to rehabilitate a certain number of people." The word "rehabilitate" holds an implicit reference in this sense to a job, but not necessarily earned income; for example, homemakers and sheltered workshop employment are included.

In the future, RSA Federal program information needs may increase with regard to occupations serving handicapped people in reflection of the changing needs of the handicapped. Improved political organization and increased physical and geographical mobility of the handicapped, both locally and nationally, will have greater implications for the occupational structure and working conditions; correspondingly, the RSA demand for occupational information may increase.

CHAPTER 4: SUMMARY AND CONCLUSIONS

I. OVERVIEW

The foregoing is an extensive documentation of need for occupational information by those Federal agencies directly within the NOICC frame of reference: BLS, ETA, NCES, BOAE, (including AVA and NACVE) and RSA. Only two* of the subagencies interviewed had so little need for occupational information in their organizational functioning that they were not included in this synthesis. The information they provided, however, was useful in developing a perspective of Federal needs for occupational information summarized in this section.

Table 2 summarizes the data needs of each of the five agencies within the major Framework categories of occupational information. An entry in any column in Table 2 indicates that a need has been documented in that agency for that category, subcategory, or element of occupational information. The absence of an entry in a column does not necessarily imply an absence of need for that information, particularly in the case of data elements not included in the original data element matrix presented to the respondents (see Appendix B). In the case where one respondent added an element in the 'other' subcategory, all other respondents would not have a chance to respond with a need for that element. However, if the summary information from Table 2 is merged with findings on agency use of occupational information from the interviews, the following profiles of need and use emerge from each of the five agencies, presented firstly by agency, and secondly by occupational information category.

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*USES Office of Program Services, and OPER Office of Program Evaluation.

Table 2

Summary of Occupational Information Needs by Selected Federal/National Agencies

Category of Occupational Information	Agency Expressing Need				
	BLS	BOAE[a]	ETA	NCES	RSA
Occupational Demand	X	X	X	X	X
Current Occupational Demand	X		X		X
- Current Occupational Employment	X		X		
Current Employment of Specific Sub-Groups					
- Veterans			X		
- Handicapped					X
- Apprentices			X		
- Job Vacancies	X		X		
Projected Occupational Demand	X	X	X	X	X
- Expansion or Reduction in Occupational Demand	X	X	X	X	
- Replacement Demand	X	X	X	X	X
Employment by Industry	X	X	X	X	
Occupational Supply	X	X	X	X	X
Enrollments in and Completers/Leavers from Educational or Training Institutions	X	X	X	X	X
- Patterns of Entry	X				
Qualified Currently Unemployed	X	X	X		
Net Migration	X	X	X	X	
Occupational Transfers	X	X	X		
New Entrants	X	X	X		
Commutation Patterns	X		X		
# Minorities Enrolled		X			
# Handicapped Enrolled		X			
Employment History of Veterans			X		
Listing of Disabled Veterans			X		
Characteristics of Insured Unemployed			X		

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[a] BOAE, AVA, and NACVE.

Table 2 (continued)

Category of Occupational Information	BLS	BOAE[a]	ETA	NCES	RSA
	Agency Expressing Need				
Occupational Supply (continued)					
Work Histories of Insured Unemployed Prior and Subsequent to Benefit Period			X		
# of WIN Participants Entering Employment by Occupation			X		
Follow-Up Information on Occupational Progress of Trained Professionals or Paraprofessionals by					
- Occupational Type	X				X
- Age of Client Population Served by Program Graduate					X
- Educational Level					X
- Whether Professional or Paraprofessional is Minority or Handicapped					X
- Salary Level	X				X
Follow-Up Information on Progress of Employed Handicapped Individuals					X
Occupational Characteristics	X	X	X	X	X
Earnings and Benefits	X	X	X	X	X
Job Duties	X	X	X	X	X
Work Settings/Conditions	X	X	X	X	X
Abilities and Aptitudes	X	X	X	X	
Licensing, Registration and Certification Requirements	X	X	X	X	X
Education/Training Skill Acquisition Patterns	X	X	X	X	
Education/Training Requirements	X	X	X	X	
Demographics of Workers	X	X	X	X	
Career Ladders	X	X	X	X	
Major Employers	X	X	X	X	X
Hiring Channels	X	X	X	X	
Occupational Titles and Descriptions	X	X	X	X	

Table 2 (continued)

Category of Occupational Information	Agency Expressing Need				
	BLS	BOAE[a]	ETA	NCES	RSA
Occupational Characteristics (continued)					
Information on How to Obtain Employment in a Given Occupation	X				
Wage Levels by Occupation of Specific Subpopulations (e.g., WIN program participants)		X	X		
Complementary Information	X	X	X	X	X
Inventory and Description of Education and Training Programs	X	X	X	X	X
Financial Assistance Programs	X		X	X	
Labor Force Demographics and Trends	X	X	X	X	
Additional Sources of Occupational Information		X		X	
Related Occupations	X	X			
Special Studies of Selected Occupations or Minority Needs		X	X		
- Energy Related Occupations		X			
- Hispanic Vocational Education Program Needs		X			
- Inventory of Facilities and Location of Programs		X			
- Supporting Resources, Teachers, Counselors, Administrators, etc. Assigned to Programs with Full/Part-Time Commitments and Qualifications for the Job		X			
- Total Unregistered and Registered Apprentices	X		X		
- Rate of Unemployment by Occupation	X		X		
- Characteristics of Disadvantaged Populations			X		
- Job Placements by Occupation			X		
- Training-Related Placements by Occupation	X		X		
- Welfare Grant Reductions for Allocation Formulas (e.g., WIN Program)			X		

Table 2 (continued)

Category of Occupational Information	BLS	BOAE[a]	ETA	NCES	RSA
Complementary Information (continued)					
- Surveys of Adult Education Enrollee Characteristics	X			X	
- Vendor Facilities by Number and Type					X
- Client Population Served by Age and Severity of Disability					X
Supply/Demand Information	X	X	X	X	
Classification Structures (Occupational Demand)	X	X	X		
Classification Structures (Occupational Supply)	X	X	X		
Matching Occupational Supply and Demand	X	X	X	X	
- Occupational Clustering	X	X			
- Cross Coding	X	X			
- Other					
- Provision of Completed Supply/Demand Analyses at Secondary, Post-Secondary and Adult Levels	X	X			
- Supply/Demand of Veterans in Specific Labor Markets			X		

II. SUMMARY OF INFORMATION NEEDS BY AGENCY

A. Bureau of Labor Statistics

BLS, as represented by the two offices contacted, needs occupational information in each of the five occupational information categories. Demand and supply data are needed at the national, state, SMSA, LMA, and occasionally county* level of geographical specificity. OES occupational code** specificity is a compromise between the detailed needs of users and the feasibility of information collection at a reasonable cost. Most of these data are needed annually, except for the job vacancy pilot survey data which are needed quarterly. Demand and supply data are needed for the development of information for use by educational planners, individual counselors/students, and for other public agencies for planning purposes.

Occupational characteristics data are also needed by national and state breakdowns and by area specificity to the extent that the data vary by area. Frequency of need for these data is less than for demand or supply data, and is characterized as annual, or as change occurs. Similar occupational detail (i.e., OES code) is preferable for occupational characteristics information. However, it seems advisable to cluster occupational categories for information on career ladders. Furthermore, information on hiring channels would be difficult to obtain by individual occupation. It would suffice if information were available across all occupations by method - i.e., taxonomic descriptions of different ways in which employers seek and obtain qualified applicants.

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*County level specificity is needed for employment by industry and commuting patterns data in order to discriminate place of residence from place of work.

**Roughly 1650 occupations on the survey-based matrix.

These data are needed for provision of occupational outlook information particularly by vocational guidance personnel and students. Complementary information is less needed by BLS, except for data to provide to labor market analysts and planners on labor market information demographics and trends and on related occupations. Finally, supply/demand data are needed at the highest level of occupational detail to permit adequate supply/demand matching to be performed. In particular, BLS emphasizes the complexity of supply/demand matching and the need for caution and precision in relating existing classification structures for planning or counseling purposes.

B. The Bureau of Occupational and Adult Education, the American Vocational Association, and the National Advisory Council on Vocational Education

These agencies are considered together in Table 2 as expressive of the occupational information requirements of the vocational education constituency. Supply and demand data are reported as needed for preparation of Congressional testimony, budget statements and administrative regulations, background papers and reports, and to assist states in program administration and development. Occupational characteristics information is needed for oversight of the guidance function at the state and local levels. Complementary information on education and training programs and labor force charactertistics is useful for responding to states' and advocacy groups' requests for information and also for ascertaining whether target groups mandated for educational assistance or emphasis by Congress are receiving adequate treatment in programs. Finally, supply/demand data are needed for management review on a state-by-state basis to provide leadership to states and to respond to Congress in the process of national priority determination in vocational education. In particular, BOAE indicated a need both for completed supply/demand analyses at the secondary, post-secondary and adult educational levels and for technical information that could be used to assist in the interpretation of supply/demand analyses at the national level. Geographical detail for supply and demand data is adequate down to the state and occasionally substate area (for Federal purposes), and occupational detail is required down to occupational clusters which correspond to available program codes. Information is perceived as needed annually, that is in October for information from the previous fiscal year (AVA). The requisite projection timeframe is considered as between two and five years--short-term, and between five and ten years--long-term.

C. Employment and Training Administration

The large number of separate organizational units within ETA considered in this analysis as compared with the other agencies results in the development of a more detailed expression of need for ETA.* In addition to being more numerous and specific, the needs in ETA vary more extensively within this agency than within the other four agencies. Some data are produced and used routinely by the same organizational subunits, whereas other agencies examined tend to have more monolithic requirements for data, e.g., almost exclusively for outside users (BLS) or solely for programmatic policy concerns (RSA). ETA's requirements for and uses of data are less easy to classify. Some data are transferred to or received routinely from other offices within ETA, and some are largely programmatic in orientation. Because the needs tend to be unit- or program-specific, separate intra-agency accounts of need in the body of the report remain the best indicators of need; and only a broad summary can be included here.

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*For reasons inherent in the method of selecting respondents, this should not necessarily be construed to imply predominance of need in ETA compared with the other agencies interviewed.

Demand data are needed for a variety of functions including national program planning and review, responding to public and private sector inquiries, legislative and budgetary testimony, and knowledge development for technical assistance to CETA prime sponsors. Specifically, for example, demand data are needed to identify and publish monthly occupations in high demand on the Job Bank network, for review of state and local ES job development activities, for identifying the need for apprentices, for CETA Title III grant application review and performance review of other CETA programs to determine local responsiveness to occupational training needs, to assure compliance with civil rights laws and to review equal employment opportunity complaints. Geographical specificity varies from the national to the prime sponsor or labor market area level, depending on organizational subunit and use. Occupational detail again varies from 9-digit DOT code to specific sets of occupations, such as apprenticeable or semi-skilled occupations, to SOC-type or less specific occupational clusters. Where regular frequency is required it is usually annual, except for quarterly provision of information related to CETA program administration and review. Few respondents indicated a preferred projection time period, and for those who did it varied between one and five years.

The need for Supply Information is similar to that for Demand, except that slightly more respondents indicated a need for supply data, and uses were in some cases different. Where demand data were used for the OID, for example, supply data are needed for publication of career guides. In CETA program review, supply data are needed to determine policies toward retraining and/or relocating displaced workers in certain industries in provision of CETA training-related placements to Congress via prime sponsor reporting on CETA trainees to the Federal regions. The number of WIN participants placed in occupations, their job retention and wage levels are also used in determining the WIN program Federal resource allocation to states. Geographical detail, occupational detail, and timing requirements for the data are all similar to those cited for occupational demand.

Occupational characteristics information is also extensively needed and used in ETA. Job characteristics data are used in career guides and occupational classification information in the preparation of the DOT. Wages and benefits data are needed for a variety of purposes, for example, in the determination of estimated costs of unemployment insurance and in knowledge development for policy decisions in the PSE program. Descriptive data are needed on non-professional and non-clerical occupations to identify the apprenticeability of occupations and to develop national standards for apprenticeship programs in specific occupations. Geographical specificity is generally required down to the labor market area level, with focus on areas of high unemployment for national CETA planning purposes. Occupational specificity is to 9-digit DOT code for more specific uses (e.g., DOT updates) at the broad occupational cluster level for national policy purposes, and at the level of specific subsets of occupations (e.g., semi-skilled or 'apprenticeable'), for program planning or review.

Complementary information is needed particularly by ETA/LMI on labor force demographics and trends for use in the preparation of projections of the population, the labor force, and the unemployed by demographic characteristics. Characteristics data on the currently unemployed, the rate of unemployment, and characteristics of disadvantaged populations, for example, are needed for CETA program decisions and other DOL activities to determine labor surplus areas. Data on commuting patterns are required for review of definitions of labor market areas. The needs for occupational detail and frequency are not so well marked in this information category and tend to be issue-and use-specific.

Finally, few respondents within ETA expressed a need for supply/demand information in any detail except for the general purposes of legislative and program development. One exception was VES, which indicated a need for completed supply/demand analyses related specifically to veterans.

D. The National Center for Educational Statistics

NCES indicated a need for all categories of information in knowledge development, to support decisionmaking in education, and to meet Congressional requirements. Demand data are needed in the study of higher education, for example, as a separate 'industry', to inform decisions on faculty tenure and retirement. Demand data in the teaching professions are also needed to provide specific information to teacher training institutions. These data are needed annually for the nation as a whole, aggregated by major academic discipline on higher education, or by major educational curricula. The VEDS system has highly specific annual needs for demand data by state and by 4-digit SOC code for its report to Congress on the overall picture of vocational education in the U.S.

Supply data are needed for higher education policy determination in areas such as, for example, the out-of-state tuition rate for students. In addition, national data are needed on the supply of teachers by major curricula and placement of graduates of teacher training institutions. Descriptive information on the current status of the public educational system are needed in terms of completers/leavers in order to respond to Congressional concerns and to assure equity in compliance with Civil Rights laws. The VEDS system also needs completers/leavers information related to vocational education programs for its report to Congress. Higher education information is needed for individual institutions, the state, and the nation as a whole. Elementary, secondary, and postsecondary data are needed at the national level and for selected states, and at the Handbook VI level of program specificity and census code for occupations (placements), although the intention is to use SOC codes when the coding system is approved. The VEDS system again needs supply data annually by state in a form readily translatable (in terms of program codes) to 4-digit SOC codes.

Occupational characteristics data are needed in higher education particularly on earnings and benefits, demographics, and career ladders at the national level by major faculty discipline to assist in knowledge and policy development. The VEDS system needs information on earnings and benefits related to occupations in which vocational program graduates are employed in order to assist in the development of evaluation measures for vocational programs. Data on occupational titles and descriptions are also needed to permit improved supply/demand linkages on movements of completers from vocational programs into and through the occupational structure.

In the complementary information category, descriptive information is needed on educational and financial assistance programs for provision to a variety of user groups at the national level. These data are needed annually at the institutional (county), Congressional district, and state level. The information is used both to inform the public of availability of educational programs and, increasingly, by individual institutions in their planning (particularly the national surveys of adult education).

Supply/demand information is needed primarily to support policy development in cases of teacher supply/demand imbalances, and for VEDS system purposes. For the former use, the data are needed at the national or regional levels, and for major teaching specialties only. For VEDS, the data are again needed annually at the state level at the SOC 4-digit level.

E. The Rehabilitation Services Administration

RSA indicated a need for all categories of occupational information except the supply/demand category. Data are needed on the current and projected occupational demand for and supply of trained vocational rehabilitation professionals or paraprofessionals in making funding education' industry, and occupations as academic disciplines within it (see NCES, Division of Post Secondary and Vocational Education Statistics, above). Other specialized needs within this data category are defined under the current employment of specific sub-groups, veterans for VES, the handicapped for RSA, and apprentices for BAT.

Again, all five agencies indicated a need for occupational supply information, particularly completers/leavers from education or training institutions. Beyond that, the needs are rather specific to individual agencies and types of information. All agencies except RSA need information on net migration and new entrants. In addition, BLS, ETA, and BOAE require information on net migration and occupational transfers. BLS and ETA expressed interest in commuting patterns from residence to place of occupation. BLS, in particular, indicated a need to include in their provision of occupational outlook and career information some data on patterns of entry into occupations, i.e., how employers actually go about searching for and obtaining qualified applicants. The remainder of the need for supply information related again to special populations within the jurisdiction of the different agencies, e.g. minority and handicapped enrollment in vocational education programs (BOAE), data on veterans, the insured unemployed and WIN participants (ETA), and on vocational rehabilitation conselors and clients (RSA).

Occupational characteristics information is the category for which the greatest consensus of need exists across agencies.* Every agency expressed a need for the category in general and, additionally, for several of the subcategories or elements (e.g., earnings/benefits, job duties, work settings and conditions and licensing, registration, and certification requirements. All agencies except RSA indicated interest in abilities/aptitudes, education/training skill acquisition patterns, and education/training requirements. All agencies except BOAE indicated a need for information on major employers. BLS, ETA, and NCES shared a need for data on demographics of the currently employed, career ladders, hiring channels, and occupational titles and descriptions. Finally, BLS expressed a need for information on how to go about actually getting a job, and ETA indicated a need for more levels, by occupation, of specific subpopulations (e.g., WIN participants).

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*This is consistent with similar findings at the state and local level. (See Lawrence and Gross, 1980.) 12/

Complementary information of some kind was also indicated as needed by each of the five agencies although the needs in this category tended, as might be expected, to be disparate and relatively specific to the agency. Only one element was called for by all agencies, the program inventory and description of education and training programs.

Comparable information on financial assistance programs was indicated as needed by BLS, ETA and NCES, and all agencies except RSA were interested in information on labor force demographics and trends. The education agencies, BOAE and NCES, were interested in additional sources of occupational information to supplement those already existing, and BLS and BOAE shared a need for information on related occupations. BOAE further indicated an interest in a number of special studies on selected occupations or, occupational or educational needs of specific subpopulations (e.g., Hispanics). ETA had a number of specialized information needs in this category, related to specific programs (e.g., BAT, WIN) or subpopulations, (e.g., the unemployed, or disadvantaged). Finally, RSA expressed a need for data on service deliverers and client populations and NCES on adult education enrollees.

The need for supply/demand information was predominant in BLS, BOAE and ETA, although only RSA expressed no specific interest in this category of information. ETA, BOAE and BLS need classification structures for both demand and supply, and need information on supply/demand matching. In particular, BOAE and ETA were specific in pointing up a need for completed supply/demand analyses for specific subpopulations or programs.

Finally, it should be re-emphasized that the lack of an indicated need by agency (symbolized by an 'x' in a row/column intersect in Table 2) should not be interpreted as necessarily a lack of need. Respondents reacted differently to our categorization scheme. Some were more familiar with the technical categorization than others, and some chose to be more specific than others. One problem with presenting their data in a comparative table such as Table 2 is that agencies with no entry in a particular cell appear as though they do not need that information. It is not possible to draw such a conclusion from the table. Only the positive side of the proposition can be reasonably inferred, that is, that those indicating a need, do in fact need the data.

IV. CONCLUSIONS

This report has presented the results from a study which may be seen as a first step in the development of specifications for an occupational information system at the Federal level. Evidence is presented of the considerable need for all categories of occupational information across the five constituent agencies. The following conclusions are presented as emerging from the above patterns of information need within and across agencies and discussed in detail in the earlier sections of the report:

- Most Federal agency information needs among the agencies surveyed emerge as routine or nonroutine, strategic or operational, or primarily Federal, or state/local in focus.
- The change of administrations in Washington since the conduct of the study may be expected to alter significantly strategic Federal occupational information needs in the agencies surveyed.
- Agencies often lack the resources to access and interpret needed information and consequently learn to function without the data.
- There is evidence of a wider Federal-level need for occupational information than documented in this survey, both within TSG agencies and among other Federal agencies.

In the first place, it is clear that while needs for these data are extensive, they vary in three systematic ways in the agencies studied. Some data needs are highly routine, for example, VEDS needs for supply data from vocational programs or ETA/OTS need for monthly demand data from the National Job Bank network to publish in Occupations in Demand. Other needs for data are nonroutine, either: i) one-time for issue papers or in response to specific Congressional inquiries, or ii) irregular to coincide with legislative reauthorization or to review specific complaints regarding civil rights violations. Data needs also appear to be associated with either strategic or operational decisionmaking in Federal agencies. Information needed for strategic decisions tends to be policy issue-oriented, more likely to need unique formats, and less likely to permit anticipation of the need in advance. Examples of these data needs can be found in the definition of information needed by OPER, AVA, and NACVE. Operational decisionmaking on the other hand relates to the ongoing Federal role in technical assistance, monitoring and review of CETA Title VI, Vocational Education or Vocational Rehabilitation programs, for example, where the information needs tend to be known in advance, regularly formatted and directed toward a more narrow programmatic focus. Finally, as the needs for occupational information were expressed in these interviews and by these agencies, there was a strong distinction between Federal needs for information for Federal operations and Federal perceptions of need for information primarily at the local level.

For reasons already stated, the emphasis in both CETA and vocational education is on planning at the local level. Thus, although this paper has concentrated on Federal needs, in the case of both of these programs, the major need for information in planning was indicated by the Federal agencies' interviews to be at the local level. Although, for example, ETA at the national level is able to identify occupations in demand each month, in the U.S. employment and training system it is not possible for a Federal agency to instruct local officials to train for these occupations. In addition, national aggregate data of this kind should only be considered as supplemental to local planners' knowledge of their own labor market operations at the local level. Thus, occupational information at the national level is perceived as a framework for analyzing problems specifically at the local level where they are often ultimately solved.

Furthermore, the Federal constituencies surveyed fall into "producers" and "users" of data. The producers' needs for information are primarily to satisfy demand placed on them by legislation, their internally developed statistical reporting programs, or various user groups, usually outside their agencies. Generally, levels of timeliness and detail are perceived as currently appropriate, since, over time, current data collection systems have evolved in response to compromises between user needs and resources available. Furthermore, producers tended to indicate that in the event additional resources are targeted toward information development, these should go toward gathering of new data (e.g., occupational mobility data for BLS) rather than on extensive and costly refinements of existing data.

Data users indicated in general that use of occupational information in programmatic (operational) decisions is limited at the Federal level, since these kinds of decisions tend to be made at the local level. Strategic decisions, however, dealing with major national policy issues, in the education employment and training constituencies, (CETA reauthorization, analyses of Federal vocational education policy) clearly need adequate occupational information for their effective resolution. This study included less "strategic" than "operational" respondents in the current sample, and therefore less attention was paid than might be desirable to central policy issues at the Assistant Secretary or Secretary level.

Third, these interviews were conducted between February and August of 1980, prior to the change of administration in Washington. The context of activity (e.g., the proposed Youth Bill, the multi-agency review of vocational education, public service employment programs) has changed and accordingly, it must be expected that agency needs for information may change immediately, particularly in the "strategic" information category referred to above.

Fourth, many of these agencies noted the lack of agency resources directed toward information gathering and interpretation activities.

As a consequence, it was pointed out that technical producers of information and users often fail to communicate with each other. Users do not communicate the types and formats most appropriate to their needs, and producers' knowledge of the limitations of their data is sometimes not communicated and often not understood. More than one respondent reiterated the observation that lack of resources necessitate functioning to a large extent without needed data:

> When you are used to operating without certain information, you learn to get along without it, but if you had it, you could probably do a better job.
>
> We are flying by the seat of our pants,...for years Congress has made decisions on employment and training and education without the statistics.

Finally, a number of respondents suggested others within their agencies (outside the set of respondents for this study) with functions needing occupational information, suggesting a wider need in the TSG agencies than presented here. Furthermore, several respondents expressed their perceptions of a need for a readily accessible nationally standardized occupational information base at the national level. This observation took two forms--one was for either an admittedly idealized interactive system, or an eventual national OIS, to assist in the determination of major policy priorities.

> I would like to have right here...a terminal, tied into a national system, which would allow us to (obtain) pieces of information, e.g., how many are enrolled in laser technology programs in urban centers of greater than or equal to 250,000 population and what's the demand for those jobs, and how many of them are black and handicapped, or the change in the number of Hispanics in Chicago in the last six months.

Another respondent suggested that there is currently no consistent body of knowledge available to NOICC and a corresponding "data base that each of us could access, [that] could be relatively consistent." Such a data base was seen as valuable in that: "instead of a series of disparate Federal policies all of which affect either education, training or business development...some of it at cross purposes, there is the possibility that there could be dovetailed programs," a supportive and mutually integrated approach to education and training for employment across all the various Federal agencies involved. Still another respondent indicated an explicit need for a national OIS relating national demographic and economic information in the education and training context. Such a system is considered unlikely to develop from a series of independently designed state systems, but would need unique Federal/national data characteristics tailored to policy makers' needs at the national level.

A second point of view extended the scope of this hypothetical system beyond the education employment and training constituency, to include basic data from all Federal agencies in their interactions with Congress and with each other. It was noted that when small businesses are targeted in specific local areas as qualifying for SBA Federal assistance, differing data bases are used in SBA decisionmaking than in associated employment and training related program decisions for the same area. In strategic decision making within ETA, for example; "There is no uniform system that's in place now that taps into studies that have been done elsewhere within DOE, for example, or BLS...there is no coherent system for marshalling all this information together" on employment and training related issues.

The problem of comparable occupational information bases in Federal decisionmaking is not unique to the constituencies covered in this report, as the following extract from a discussion on Employment Standards Administration data needs in a Senate Appropriations Committee[21/] hearing demonstrates:

> Senator Eagleton. Some compliance agency and contractor officials have complained of problems in setting employment totals because of the absence of precise data on the number of minorities and women available for employment.
>
> What is being done about this?
>
> Mr. Rougeau. We will, hopefully, in fiscal year 1980,undertake to refine data which are available to help contractors set goals for minorities and women.
>
> This has been an ongoing problem. Employers have the responsibility to set the goals themselves. But there have often been contests between the Government on one hand, and the employer on the other, as to what constitutes availability for a specific job category.
>
> Let's say you are talking about engineers, minorities and females. Rockwell might say, "We know there are only 300 engineers around the country. We've been to all the college campuses. Those are the only women that are available."
>
> A compliance officer might say, "My figures say there are 550," and there is a battle that ensues there.
>
> We think the program would be well served if the Government could come out with availability figures which employees could rely upon in setting their goals, and end these contests.

It is noted in a recent report that occupational information is "costly to uncover...but very cheap to disseminate."[22/] Social benefits are associated with its widespread and rapid dissemination. In particular, "statistics on labor and conditions of the workforce are increasingly important, not only politically, but also because they condition policy decisions and public expectations of the state of the economy and the strength of the nation."[23/] In addition, it is suggested that "information gathering and dissemination are two activities which can best be accomplished at the Federal level."[24/]

Clearly there are still major unmet needs at the Federal/national level for occupational information. Further research is indicated to determine precisely the details of such needs both in the TSG, other agencies, and in the relevant Congressional subcommittees, to ascertain where consensus lies so as to suggest ways in which these information needs may be met more systematically in the future. Expanding the set of agencies beyond the TSG should include, for example, not only those agencies conceivably needing a common data base for decisionmaking with the TSG agencies (e.g. those agencies such as USDA and Interior which are involved through interagency agreements in the employment and training process) but also those both in and outside the executive branch directly involved with, or in a position to inform the education or employment and training administration policy process (e.g. OMB, GAO, CBO).

NOTES

[1] L. C. Thurow, The Zero-Sum Society: Distribution and the Possibilities for Economic Change (New York: Basic Books, Inc., 1980).

[2] C. Kerr, "Industrialism with a Human Face", in Work in America: The Decade Ahead, ed. C. Kerr and J. M. Rosow (New York: Van Nostrand Reinhold Co., 1979), p. IX.

[3] Ibid, p. XIV.

[4] Employment and Training Report of the President, Washington, D.C. 1980, pp. 3-4.

[5] R. A. Katzell, "Changing Attitudes Toward Work", in Work in America: The Decade Ahead, ed. C. Kerr and J. M. Rosow (New York: Van Nostrand Reinhold Co., 1979), pp. 35-57.

[6] Joint Economic Committee, Special Study on Economic Change, Human Resources and Demographics: Characteristics of People and Policy, A Staff Study (Washington, D.C., November 1980).

[7] Section 161(b), (I), (A) Education Amendments of 1976, Public Law 94-482.

[8] National Commission on Employment and Unemployment Statistics, Counting the Labor Force (Washington, D.C., 1979).

[9] Garth L. Mangum, Employment and Unemployment Statistics and the CETA Prime Sponsor, National Commission on Employment and Unemployment Statistics, Background Paper No. 7 (Washington, D.C.: U.S. Government Printing Office, 1978).

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Appendix A

LIST OF SURVEY RESPONDENTS BY AGENCY

Appendix A

LIST OF SURVEY RESPONDENTS BY AGENCY

BLS	Michael Pilot/Michael McElroy Office of Economic Growth and Employment Projections Bureau of Labor Statistics
BLS	Neal Rosenthal Office of Economic Growth and Employment Projections Bureau of Labor Statistics
BLS	Brian MacDonald Office of Employment Structure and Trends Bureau of Labor Statistics
BOAE	Dr. Daniel B. Dunham Deputy Commissioner for Occupational and Adult Education Bureau of Occupational and Adult Education
BOAE	Dr. L. B. Hicks Division of Occupational Planning Bureau of Occupational and Adult Education
BOAE	Dr. Leroy A. Cornelsen, Director Division of State Vocational Program Operations Bureau of Occupational and Adult Education
BOAE	Barbara Mroz Bureau of Occupational and Adult Education
BOAE	C. Kent Bennion, Chief Program Support Branch Bureau of Occupational and Adult Education
BOAE	Ed Nelson Distributive Education Bureau of Occupational and Adult Education
BOAE	James Wykle, Chief State Programs and Services Branch Bureau of Occupational and Adult Education
AVA	Gene Bottoms American Vocational Association
NACVE	Ray Parrot National Advisory Council on Vocational Education

NACVE	Ralph Bregman National Advisory Council on Vocational Education
VES/ETA	Ralph Hall, Director Veteran's Employment Service Employment and Training Administration
VES/ETA	Jeff Crandell Technical Services Veteran's Employment Service Employment and Training Administration
VES/ETA	Dennis Roades National Programs Veteran's Employment Service Employment and Training Administration
ETA/DEEO	Mr. Fred Drayton, Chief Division of Equal Employment Opportunity Office of Investigation and Compliance Employment and Training Administration
ETA/DIASD	Mr. John J. Long Division of Information Analysis and Systems Development Office of Administration and Management Employment and Training Administration
OPP/ETA	Richard G. Seefer/David T. Duncan Office of Policy and Planning Employment and Training Administration
ETA	William Langbehn/Doris M. Gardner Division of Legislation and Program Development Office of Policy and Planning Employment and Training Administration
ETA/LMI	Sam Hirabayashi, Head/Jim Higgins Division of Labor Market Information Office of Policy Evaluation and Research Employment and Training Administration
BAT	James P. Mitchell, Administrator Bureau of Apprenticeship and Training Employment and Training Administration
ETA/UIS	James Manning, Chief Division of Actuarial Services Office of Research, Legislation and Program Policies Unemployment Insurance Service Employment and Training Administration

ETA	Luis Sepulveda U.S. Employment Service Office of Technical Support Employment and Training Administration
ETA/OCED	Mr. Jess Ramaker, Director Office of Community Employment Programs Employment and Training Administration
ETA/OCED	Mr. Robert Colombo, Chief Division of Program Review Office of Comprehensive Employment Development Employment and Training Administration
ETA/OCED	Ms. Nancy Beckley Division of Program Review Office of Comprehensive Employment Development Employment and Training Administration
ETA/WIN	Mr. Merwin Hans, Staff Director National Coordinating Committee WIN Program Employment and Training Administration
ETA	Earl Klein U.S. Employment Service Office of Program Services Employment and Training Administration
ETA/ONP	Mr. W. J. Kacvinsky, Deputy Director Office of National Programs Employment and Training Administration
ETA/OPER	Mr. Seymour Brandwein, Head/Pat O'Keefe Office of Program Evaluation Office of Policy Evaluation and Research Employment and Training Administration
OYP	Evelyn Ganzglass Division of Program Planning and Design Office of Youth Programs Employment and Training Administration
OYP	Don Chiavacci Division of Program Planning and Design Office of Youth Programs Employment and Training Administration

NCES	Dr. Robert Morgan Systems Design and Analysis Branch Division of Post-Secondary and Vocational Education Statistics National Center for Education Statistics
NCES	Ms. Marjorie Chandler Head of Division of Secondary and Post-Secondary Education Statistics National Center for Education Statistics
NCES	Ms. Evelyn Kay, Chief Adult and Vocational Surveys and Studies Branch Division of Post-Secondary and Vocational Education Statistics National Center for Education Statistics
NCES	Ms. Jane Crane Population Surveys Branch Division of Elementary and Secondary Education Statistics National Center for Education Statistics
NCES	Mr. Paul Mertins, Chief University and College Surveys and Studies Branch Division of Post-Secondary and Vocational Education Statistics National Center for Education Statistics
RSA	Toby Hollin Vocational Rehabilitation Program Specialist Office of Program Development Rehabilitation Services Administration
RSA	Betsy Bush Office of Program Development Rehabilitation Services Administration
RSA	Barbara Sweeney Office of Program Development Rehabilitation Services Administration
RSA	Richard Poirier Office of Program Development Rehabilitation Services Administration
RSA	Dolores Watkins Office of Program Development Rehabilitation Services Administration

RSA	Lester Blankenship Office of Program Operations Rehabilitation Services Administration
RSA	Gregory Paul Office of Program Operations Rehabilitation Services Administration
RSA	Donald Rawe Office of Program Operations Rehabilitation Services Administration

Appendix B

RESPONDENT DATA ELEMENT MATRIX

Respondent Data Element Matrix

1. Occupational Demand

Federal Decision/ Planning Function	Category of Occupational Information	Need		Geographical Detail	Occupational Detail	Frequency	Projection Timeframe	How Used
		High	Low					
	1. Occupational demand							
	1.1 Current occ. demand							
	1.2 Projected occ. demand							
	1.21 expansion or reduction in occ. demand							
	1.22 replacement demand							
	1.3 Employment by industry							
	1.4 Other							

Respondent Data Element Matrix

·2. Occupational Supply

Federal Decision/ Planning Function	Category of Occupational Information	Need		Geographical Detail	Occupational Detail	Frequency	Projection Timeframe	How Used
		High	Low					
	2. Occupational supply							
	2.1 Enrollments in and completers/ leavers from educational or training institutions							
	2.2 Qualified currently unemployed							
	2.3 Net migration							
	2.4 Occupational transfers							
	2.5 New entrants							
	2.6 Other							

Respondent Data Element Matrix

3. Occupational Characteristics

Federal Decision/ Planning Function	Category of Occupational Information	Need		Geographical Detail	Occupational Detail	Frequency	Projection Timeframe	How Used
		High	Low					
	3. Occupational characteristics							
	3.1 Earnings + benefits							
	3.2 Job duties							
	3.3 Work settings/conditions							
	3.4 Abilities + aptitudes							
	3.5 Licensing, registration and certification requirements							
	3.6 Education/training skill acquisition patterns							
	3.7 Education/training requirements							
	3.8 Demographics of workers							
	3.9 Career ladders							
	3.10 Major employers							
	3.11 Hiring channels							
	3.12 Occupational titles and descriptions							
	3.13 Other							

Respondent Data Element Matrix

4. Complementary Information

Federal Decision/ Planning Function	Category of Occupational Information	Need		Geographical Detail	Occupational Detail	Frequency	Projection Timeframe	How Used
		High	Low					
	4. Complementary information							
	4.1 Inventory and description of education and training programs							
	4.2 Financial assistance programs							
	4.3 Labor force demographics and trends							
	4.4 Additional sources of occupational information							
	4.5 Other							

Respondent Data Element Matrix

5. Supply Demand Analysis

Federal Decision/ Planning Function	Category of Occupational Information	Need		Geographical Detail	Occupational Detail	Frequency	Projection Timeframe	How Used
		High	Low					
	5. Supply demand analysis							
	5.1 Classification structures (occupational demand)							
	5.2 Classification structures (occupational supply)							
	5.3 Matching occupational supply and demand							
	a) occupational clustering							
	b) cross coding							
	5.4 Other							

Appendix C

LIST OF ACRONYMS

Appendix C

LIST OF ACRONYMS

AFDC	Aid to Families with Dependent Children
AVA	American Vocational Association
AVSSB	Adult Vocational Surveys and Studies Branch
BAT	Bureau of Apprenticeship and Training
BLS	Bureau of Labor Statistics
BOAE	Bureau of Occupational and Adult Education
CALMAS	Computer Assisted Labor Market Analysis System
CBO	Congressional Budget Office
CETA	Comprehensive Employment and Training Act
CIS	Career Information System
DAS	Division of Actuarial Services
DESES	Division of Elementary and Secondary Education Statistics
DIASD	Division of Information Analysis and Systems Development
DLMI	Division of Labor Market Information
DLPD	Division of Legislation and Program Development
DOA	Division of Occupational Analysis
DOE	Department of Energy
DOL	Department of Labor
DOT	Dictionary of Occupational Titles
DPPA	Division of Planning and Policy Analysis
DPPD	Division of Program Planning and Design
DPR	Division of Program Review
DPVES	Division of Post-Secondary and Vocational Education Statistics
DVOP	Disabled Veterans Outreach Program

ES	Employment Service
ETA	Employment and Training Administration
GAO	General Accounting Office
HEGIS	Higher Education General Information Surveys
HIRE	Help through Industry Retraining and Employment
LMA	Labor Market Areas
LMI	Labor Market Information
NACVE	National Advisory Council on Vocational Education
NCC	National Coordinating Committee
NCEP	National Commission for Employment Policy
NCES	National Center for Education Statistics
NGA	National Governor's Association
NOICC	National Occupational Information Coordinating Committee
OAM	Office of Administration Management
OCED	Office of Comprehensive Employment Development
OCEP	Office of Community Employment Programs
OE	Office of Education
OES	Occupational Employment Statistics
OIC	Office of Investigation and Compliance
OID	Occupations in Demand
OIS	Occupational Information System
OJT	On-the-Job-Training
OMB	Office of Management and Budget
ONP	Office of National Programs
OOH	Occupational Outlook Handbook
OOQ	Occupational Outlook Quarterly

OPE	Office of Program Evaluation
OPER	Office of Policy Evaluation and Research
ORLPP	Office of Research, Legislation and Program Policies
OTS	Office of Technical Support
OYP	Office of Youth Programs
PSB	Population Surveys Branch
PSE	Public Service Employment
RSA	Rehabilitation Services Administration
RTI	Research Triangle Institute
SACVES	State Advisory Councils on Vocational Education Systems
SBA	Small Business Administration
SESA	State Employment Service Agencies
SIE	Survey of Income and Education
SMSA	Standard Metropolitan Statistical Area
SNAPS	State/National Apprenticeship System
SOC	Standard Occupational Classification
SOICC	State Occupational Information Coordinating Committee
TSG	Technical Steering Group
UCSSB	University and College Surveys and Studies Branch
UCX	Unemployment Compensation for Ex-Servicemen
UI	Unemployment Insurance
UIS	Unemployment Insurance Service
USDA	U. S. Department of Agriculture
USDHEW	U. S. Department of Health, Education and Welfare
USES	U. S. Employment Service
USOE	U. S. Office of Education

VA	Veterans Administration
VEA	Vocational Education Agency
VEDS	Vocational Education Data System
VES	Veterans Employment Service
WIN	Work Incentive Program